



THE
ECLECTIC

MANUAL
OF
METHODS.

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THE
ECLECTIC MANUAL
OF
METHODS

FOR THE ASSISTANCE OF TEACHERS

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5-514 by J. T. Stewart



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THE ECLECTIC MANUAL.

INTRODUCTION.

THIS Manual is the outgrowth of numerous requests from young and inexperienced teachers of country district schools in nearly every part of the United States for assistance in their work. While it is therefore addressed particularly to this class, it is hoped that it contains many suggestions which will prove useful, also, to teachers generally.

During the past few years, there has been a strenuous effort made in many states to evolve some degree of symmetry and order out of the chaos in which the ungraded schools have heretofore existed. Superintendents have held meetings and discussed methods and the proper use of text-books; they have also, in many cases, issued manuals to their teachers, setting forth the results of the conferences, and making many valuable suggestions as to the future conduct of the schools. These manuals, although frequently differing in unessential details, agree in recommending a definite and uniform

course of study, and, as far as may be possible, a uniformity of text-books in classes.

Wherever these suggestions of the superintendents have been followed, the schools without exception have been improved in character. But many difficulties confront the inexperienced teacher, regarding which he receives no aid from the superintendent's manual. Not the least of these, perhaps, is owing to the fact that he does not understand how to use his text-books to the best advantage. In order to use a book properly, a teacher must know what the aim of the book is; on what plan it has been constructed, and in conformity with what method; how far its text is merely suggestive, etc. As the Eclectic Educational Series is used very generally in the district schools throughout the country, the Publishers feel themselves called upon to aid in supplying such information in regard to these books and their use as will assist the teacher in securing the best possible results. With this object in view, the following books of the Eclectic Educational Series have received full and careful treatment: McGuffey's Revised Eclectic Primer, Readers, and Spelling-Book; the New Eclectic Penmanship; Ray's New Primary, Intellectual, and Practical Arithmetics; the New Eclectic Elementary and Complete Geographies; Harvey's Revised Elementary Grammar and Composition, Harvey's Revised English Grammar; the Eclectic History of the United States; the Eclectic Physiology and Hygiene.

The several books mentioned have been prepared in conformity with those modern methods of teaching which are recognized by the most advanced instructors as the best. It has been the endeavor to show in this Manual what the method is for each subject, and how it should be applied. Suggestions as to details have been given wherever it is felt they will be of service, but they must be viewed in the proper light, as mere suggestions. For example, it is by no means desired to convey the impression that in our opinion the plan suggested for conducting the opening lesson in McGuffey's Revised Eclectic First Reader is the *only* proper plan for conducting that lesson. The same is true of all similar suggestions: it is not intended that they shall be followed servilely, but simply be accepted as hints. Each teacher must necessarily originate his own plan of conducting a lesson. Originality in this respect is indeed a necessary element of success; for the teacher must be able to recognize the particular needs of his own school, and must adapt his teaching to those demands. No amount of suggestions will give this power, nor can any one teach the knack of imparting information to others. It is a well known fact that many a wise man is a very poor teacher owing to deficiency in this respect.

A teacher's success, then, depends very largely upon natural gifts, but it also depends upon a thorough knowledge, not only of the subjects he teaches, but also of the methods and books that he uses. With this

knowledge added to the necessary natural gifts, a teacher, no matter how inexperienced, may look confidently for good results from his teaching. Without it, even the most experienced teacher can not attain the best results. To supply this necessary information in regard to the books of the Eclectic Educational Series is the aim of this Manual, and it is issued in the hope that it will prove of valuable assistance to all teachers who are using those books in their schools.

The Publishers take this opportunity of expressing their obligations to Superintendent R. W. Stevenson, Hon. Thomas W. Harvey, Miss M. E. Thalheimer, Dr. Eli F. Brown, and J. T. Stewart for their valuable assistance in the preparation of this Manual.

READING



I.

AUXILIARY STUDIES.

THERE are certain studies intimately connected with reading which should be taught in connection with it from the first. It will therefore be well to consider these briefly, and their relations one to another, as well as to the reading lesson itself, before taking up the details of the reading lesson proper.

The four important auxiliary studies to be considered are: Language Lessons, Writing, Object Lessons and Composition, and Spelling.

Language Lessons.—When the child first comes to school, he knows how to talk. He learned this art by associating certain spoken words with certain objects, attributes, and actions. He *imitated* the words that he heard, and thus in time learned to speak. If he has always heard correct language, his own language will for the most part be correct, and the errors he makes through inexperience or imperfect reasoning can be easily rectified. But the case is different where the child *hears* the same grammatical blunders and inelegant expressions day after day, at home or on the playground, and naturally imitates them. These errors can be overcome only by patient persistence on the part of the child's instructors. A child of well educated and refined parents, and one whose associates are cultivated persons, will probably have but little use for a grammar at any time; but such children are the rare exceptions, and the

teacher must prepare to battle against great odds. He has only the short time that the child is in school to weigh against the many hours spent by that child under adverse influences, therefore there is all the more reason why work in this direction should receive the most watchful attention. Never allow a grammatical blunder to pass uncorrected either in a child's speech or in his written exercises. Above all, the teacher should be careful about his own language, both as to the choice of words and the form of expression.

Do not make the mistake of writing wrong forms on the board, or elsewhere, for correction by young children. This may be done with profit in advanced classes, but it is best that a beginner should never see a wrong form of word or expression in the school-room. Correct all bad English instantly and quietly, but teach only the best, and bear in mind that the best is nearly always the simplest.

This instruction in language is of the greatest importance to the child. "Just as the twig is bent the tree's inclined," and a man frequently bears unconsciously through life the marks of his early training. Habits of incorrect speech acquired in childhood become a part of a man's nature, and cling to him in his old age in spite of the cultivation of later years.

But language lessons should not stop with the correction of language; they should teach, also, the proper use of the different parts of speech and the meaning of words. We do not mean the formal rules of grammar, nor the formal definitions of the dictionary; but, by skillfully prepared and carefully graded oral exercises, practically illustrated, the child's vocabulary may be extended, and he may be taught to understand and to use

English correctly,—when to use *is* and when to use *are*; to distinguish between *this* and *that*, and *these* and *those*, *I* and *me*, *who* and *which*, *slow* and *slowly*, *strong*, *stronger*, and *strongest*, etc., etc.

Writing.—The reading and the writing of script should be begun with the first reading lesson. Children in the primary classes are occupied but a small portion of the time in reciting, and it is absolutely necessary to employ the remainder of their time in school in some way that will interest as well as instruct them. In no other way can this time be employed to better advantage than by having the scholars copy on their slates, or on the blackboard, both the printed and written forms of the letters and words learned in their reading lesson, for in no other way will the characters be so indelibly stamped upon the minds of the children.

To facilitate instruction in these writing lessons, we present, on the four pages following, the “Slate Exercises” to be found on pages 61–64 of McGuffey’s Revised Eclectic Primer. They will be found invaluable in this connection, and are repeated here for the benefit of those teachers who for any reason do not wish to use the Primer, and think it best to begin with the First Reader. In these Exercises, the small script letters are given in the order of their simplicity. They should be practiced as given in the copy, first separately, and then in combination, forming a word. It is not intended that the class should be confined to the exercises presented in the book. As rapidly as new letters are introduced, the teacher should form new words, and the exercises may then be multiplied at discretion.

By the time a child has completed pages 14, 15, and 16, he should be familiar with all the small script

SLATE EXERCISES.

n n n nun

u u u uu

s u n sun

e o u ou

s u n saw

r i m rim

e a t eat

l a d lad

b o x box

h e n hen

k i d kid

g u o quo

p e n pen

f a n fan

e y e eye

g u n gun

v u z uz

v v y vy

f a n fan

SCRIPT ALPHABETS.

A B C D E F G
H I J K L M
N O P Q R S T
U V W X Y Z
a b c d e f g h i
j k l m n o p q
r s t u v w x y z

SCRIPT FIGURES.

1 2 3 4 5 6 7 8 9 0

letters. The capitals, given alphabetically on page 17, and the script figures should be taught gradually, according to the daily requirements of the reading lessons. The copies presented on these four pages may be used apart, if so desired, simply as writing lessons, and to employ the unoccupied time of the children, but this work should by no means be allowed to interfere with the writing to be taught in connection with the reading lessons, which should be conducted as follows:

Before beginning work, see that each child is provided with a slate properly ruled.* It is important, too, that each child should have a long and neatly sharpened slate pencil, for it must be borne in mind that this slate work is preparatory to work in the copy-books; and it is very necessary that the first steps should be taken properly, and that no bad habits be formed. The child must be taught to hold a pencil in exactly the same way as he will be taught in future to hold a pen. (See *Hand-book to the New Eclectic Penmanship*, page 24.) This is an impossibility with a short pencil. Moreover, a short

* It is necessary that this ruling be done very carefully, and, to secure the necessary accuracy and uniformity, the teacher himself should rule all the slates. The proper form of ruling is shown on pages 14, 15, and 16. The lines should be scratched on the slate with some sharp instrument, and care must be taken to make all lines exactly parallel and at right angles to the side of the slate, also to make the corresponding spaces precisely equal. A steel pen from which the points have been broken, leaving two stubs about one eighth of an inch apart, will be found of much assistance in scratching the lines properly. It is a good plan to rule the lines first with a slate pencil, and, when you have thus located them just as they should be, go over the pencil lines with a scratcher.

pencil invariably leads to the bad habit of cramping the hand, while a clumsy, blunt pencil can be expected to produce but clumsy work. An intelligent teacher will look carefully after just such points in order to produce the best results.

Of course, too great precision in the form and slant of the letters, or in any of the "fine points" of writing, is not to be expected of very young children. Let details go unnoticed at first, and be content with a careful correction of glaring faults in the position of the body and the limbs, in the manner of holding the pencil, etc. Little by little, one after another, the errors may be corrected and good habits formed. Thus, when work in the copy-books is commenced, tasks will prove easy and progress will be rapid.

Give each child credit for effort, no matter how crude the first writing may be. The mere attempt at writing is meritorious, and it is very important that the child should not become discouraged at the outset.

Begin the lesson in writing by putting on the black-board, between a head and a base line, in large, well-formed script, the first word learned in the reading lesson, or the first letter taught by the Phonic method, and let the children try to copy it on their slates; when this is fairly learned, take up the next word or letter, and so on, until the children can write all the words of the lesson. The children are supposed to learn the printed forms of these words in the reading lesson proper; and, if thought best to do so, the printed forms may also be practiced on the slates, the children using their books to copy from.

The teacher should explain that the script forms mean exactly the same thing as the printed forms, and should

see that this is thoroughly clear to the pupils. Lest there should be confusion on this point, many teachers prefer to teach the writing of script only. With a little care, however, there need be no confusion, and practice on the printed forms certainly aids to fix them in the child's memory. Care must be taken, however, to advance very slowly at first. Do not introduce the second word until the first is fairly learned. When all the words are learned, they should be combined, and a part of the reading lesson for each day should be written on the slates, and then read aloud.

The script exercises throughout the Primer and Readers are made up of only such words as have preceded them in print. They present no difficulties, therefore, except as exercises in writing and reading script. Let them be used as copies for slate work.

Object Lessons and Composition.—As soon as the children have learned a sufficient number of words to make it practicable, have them compose sentences differing from those found in the book. The review lessons in the Primer and Readers are constructed entirely from words learned in preceding lessons, and the teacher can readily make others of a similar nature. At first it will be necessary to dictate sentences for the children to write, or to put sentences on the board for them to copy, but in a short time the children will be able to compose their own sentences, and they should be encouraged to do this as early as possible, for children should be led to think for themselves, and not merely to imitate.

The illustrations of the Readers should be used as the basis of object lessons, and short compositions should be written about them. Before giving a lesson of this kind

to the class, have a talk with them about the picture that is to be the subject. The field is a wide one, but much depends upon the adroitness of the teacher in making suggestions and developing ideas, so as to get all the good possible out of the lesson.

Long experience shows conclusively that object lessons are of little or no value except in connection with writing. The two branches should therefore be taught in combination.

Do not confine the object lessons to the reader illustrations. A collection of familiar objects, such as pieces of metal, wood, and flowers, felt and leather, etc., should be made for use in this connection. Occasionally, let the children select their own subjects for composition in what they see about them in the school-room or at home, at churches, art galleries, or museums, or on their way to and from school. In short, let them write about whatever interests them. *Interest* is the mainspring of this form of study. Encourage it in every possible way. Stir up a healthful spirit of rivalry among the children as to who can see the most and describe it in the best manner. Do not be too strict as to precise forms, but stimulate freedom of expression. This exercise trains the observation, gives the child fluency in using the words he has learned, and is at the same time a drill in expression and grammar, and in penmanship.

The exercises should be begun as early as possible,—that is, just as soon as a child, *without forcing*, can express an idea in its written form,—and they should be continued throughout the school course. As the child takes up successively the studies of arithmetic, geography, history, grammar, and natural science, his mind develops and his ideas broaden; nothing will assist this

mental growth so materially as the practice of putting into written words the facts learned and the thought evolved. Geography, history, and science furnish an inexhaustible supply of interesting topics; arithmetic develops logic, and grammar assists expression. Thus, composition is a sure index to the intelligent teacher of the mental development of the child; whether he has profited by teaching, and has acquired ideas, or simply "words, words, words." In fine, there is no more important study in the common school curriculum than that of original composition. Unfortunately, there is no study which is more neglected.

Spelling has to do with written language only. It bears the same relation to the written word that pronunciation does to the spoken word; and if there was no such thing as writing or printing, there would be no such thing as spelling. Spelling, then, is properly taught in connection with writing. If taught orally only, it is of but little use, and while children may appear to make rapid progress in this department, and be able to spell difficult and unusual words in a manner wonderful to the casual visitor at the school, yet these difficult and unusual words are forgotten, as a rule, as soon as the drilling process is abandoned; whereas, the aim of spelling is so to drill the child that in his after life, when school days are over, he can write any word in his vocabulary instantly, without a doubt or a thought as to its spelling.

If the writing lessons suggested are performed in connection with each day's reading lesson, the child unconsciously learns to spell each word by writing it over and over again, and if the teacher does his duty in the careful correction of the object lessons and compositions of

his classes, there will be no need of formal spelling lessons in the first years of school work. The spelling-book has its proper place, and a valuable one, but that place is not in primary classes. The practice of selecting words for spelling from the readers and exercises should be continued in all grades, even when the spelling-book is used.

II.

METHODS OF TEACHING.

READING naturally presents itself as the first subject to be taught to young children. It is the foundation upon which the education is built, the key that unlocks all other branches of study. It is of the greatest importance, then, that this first step in education be taken in the proper manner and in the right direction. It is possible, on the one hand, greatly to interest the little child from the outset of his school life; and, on the other, to discourage him utterly, and so disgust him with study that he presents to us anew Shakespeare's picture of

"The whining school-boy, with his satchel
And shining morning face, creeping like snail
Unwillingly to school."

Properly conducted, the reading lesson may be made a source of real pleasure to the child, and at the same time a well-spring of information on many subjects. Improperly conducted, it becomes a mere memorizing, mechanical process, devoid of all interest, and burdensome alike to teacher and pupil.

While the rapidity of advancement depends largely upon the natural intelligence of the pupils, the thoroughness of the work and the real good accomplished depend almost entirely upon the intelligence of the teacher and the method of conducting the recitation.

Much has been said and written by experienced teachers and others as to methods of teaching reading. The Alphabet, Phonic, Phonetic, Word, and Script methods, and perhaps others,—all have their warm adherents, who claim that their particular method is *the* only method by which reading can be taught properly; and yet we know that almost equally good results are obtained by teachers who use different methods.

No doubt some methods are better than others, and it is certain that some one well-approved method should be adopted; but we wish to warn the young teacher especially of the danger that the method will become a hobby unless he is careful, and that thus the end will be lost sight of in attention to the means. Select your method, and be consistent in its use, but do not allow yourself to be bound by laws that will admit of no display of judgment.

Probably the three most clearly defined and distinctly different methods are the Alphabet, the Word, and the Phonic methods. The Alphabet Method is still used in some of the best graded schools in the country; therefore, the Revised Eclectic Primer and Readers are so prepared as to meet fully the requirements of this method, should a teacher see fit to employ it. The printed alphabets, large and small, may be found on pages 4 and 5 of the Primer, and on page 4 of the First Reader. The corresponding script alphabets are given on page 5 of the First Reader. By this method, the child is first taught the letters, then to combine the letters into words, and finally to combine words into sentences. No attention is paid in this method to diacritical marks; and the names of letters are taught, not the sounds.

The Word Method teaches a child to recognize words as wholes; and, where objects are used in illustrating the first steps, it is sometimes called the Object Method. This method pays no attention to elementary sounds and diacritical marks. After a number of words are taught as wholes, the children are told the names of the letters, and learn to spell.

By the Phonic Method, the child is first taught the elementary sounds of letters; he is then taught to combine these elementary sounds into words. The sound is first taught, and then the character which represents it; the spoken word is learned, and then its written and printed form. This method pays no attention to words as wholes until the elementary sounds composing them are learned.

The Combined Word and Phonic Method first presents the word as a whole, and after a number of words are learned in this way, the elementary sounds composing them are taught, with the characters which represent them.

While McGuffey's Readers are prepared to meet the demands of each of the recognized methods, they are especially adapted to the Phonic Method and to the Combined Word and Phonic Method, which are the two methods most extensively used by successful teachers of primary reading. It is suggested, therefore, that the teacher select one of these methods of instruction. In order that both may be fully understood, we give a rather full description of their different principles and processes.

The Combined Method aims to teach the child to read just as he learned to talk. The child, before coming to school, has learned to associate the spoken word with

the object, quality, action, etc., which that word represents. He knows nothing of the component parts of a word; he simply knows the sound of the word as a whole. The Combined Method aims to continue the child's mental development naturally from this point; it utilizes the child's knowledge of the spoken symbol to teach him to associate the corresponding written or printed symbol with the object, quality, or action represented by it.

The Combined Method contemplates the following steps:

1. The object, or picture of the object, is first presented to the child, and its name called for; then the word is given, and written upon the board. Both object and word are observed until the child instantly associates the one with the other.

2. The word is impressed on the child's mind by requiring him to write it, or to print and write it, over and over again.

3. Words united into phrases and sentences are taught in the same manner as single words; that is, the idea is developed first. The child is led to express the thought in words, and these words are then presented to his eye and impressed upon his memory.

4. The child learns to use written words by combining them himself into phrases and sentences.

5. Words are analyzed, or separated into their elementary sounds.

6. The child learns the letters or combinations of letters that represent these elementary sounds.

7. The child learns to combine the letters so as to form new words.

8. The use of diacritical marks and of the marks of

punctuation are learned gradually by the association of ideas.

9. Spelling is unconsciously learned by repeatedly writing the words of the reading lesson.

This order is followed in the detailed instructions for conducting the first lesson of McGuffey's Revised Primer. See page 33.

The Phonic Method also aims to lead a child naturally from the known to the unknown. The primary distinction between it and the Combined Method is that the sense of hearing is first appealed to instead of the sight. Long before a child can speak, he is able to distinguish sounds. He recognizes the voices of his mother, father, brothers, and sisters, and distinguishes each from the others. It is claimed, therefore, by the adherents of this method, that inasmuch as hearing is the sense which is first developed, it should be used rather than the sight in the preliminary steps. The following order of teaching reading is in accordance with the principles of the Phonic Method:

1. The child is taught the nature of sound.
2. The child is required to distinguish sounds of different kinds.
3. The written characters which represent the elementary sounds of our language are next taught, commencing with the simplest sounds; that is, the short vocals.
4. The elementary sounds are combined so as to form written words.
5. Written words are combined into sentences.
6. A few words made up of difficult sounds should be taught as wholes. The articles *a*, *an*, and *the* are of this nature; and these are not only taught as wholes,

but must invariably be taught in combination with the words following.

NOTE.—This, it will be seen, is not in conformity with a pure Phonic method, but it is the course pursued universally by the best teachers.

7. The children are now required to make the transition from script to Roman or printed forms.

8. The meaning of words is carefully developed.

9. The use of capital letters and the principal marks of punctuation are taught gradually, as they are used in the text.

10. The children are taught to spell orally and by writing.

11. The children are led to discover the expression through the thought.

By comparing the several steps of the Combined and the Phonic methods, we note the following principal differences:

1. The Phonic Method appeals first to the ear. The Combined Method, to the eye.

2. The Phonic Method first teaches the elementary sounds, and then combines them into words. The Combined Method first presents the word, and then separates it into its elementary sounds. In this step, the Phonic Method is synthetic; the Combined Method is analytic.

NOTE.—It will be observed that the Combined Method employs synthesis later in requiring the pupil to unite the elementary sounds into words.

3. The Phonic Method teaches the diacritical marks at the beginning. The Combined Method does not teach them until words are learned as wholes.

The detailed instructions for *Lesson I* of the First Reader are in accordance with the Phonic Method. The teacher should carefully compare these instructions with those for conducting the first lessons of the Primer before deciding which method he will use. It is of course understood that, whichever method be adopted, it must be used in teaching both the Primer and the First Reader.

In the selection of a method, the teacher has simply to consider by which one he can teach a child in the shortest time to read simple sentences intelligently. This is the chief aim in primary reading classes. After a certain point, of course, no matter what the method, the primary steps are abandoned as no longer necessary, and the teacher must then bear constantly in mind the two main objects in learning the art of reading.

The first object in reading, as we understand it, is to apprehend properly the thought of the writer; and the second object, that of oral reading, is to communicate this thought to others clearly and in the author's exact words. The word "thought," in this connection, is intended to include, however, not only the exact words of the writer, but also the mind or soul that inspired the words. Without the latter, reading is unintelligent and profitless. The constant care, then, should be to see that the child grasps the idea fully before he attempts to express it in words. "Ideas before words" always, but in no study should this rule be more strictly observed than in teaching reading. When a printed or written word, phrase, or sentence evolves a clear idea in a child's mind, he expresses it naturally; or, in other words, he reads exactly as he would speak, and this is the proof to the hearer that the reader understands

what he is reading. This is the chief use of oral reading in the school-room. The teacher must not forget that oral reading in after years will be very small in comparison with silent reading; therefore, the child should be taught to gather, in silence and with rapidity, the ideas from the printed page.

III.

McGUFFEY'S PRIMER.

THE use of this book in the series is optional with the teacher, as the Readers have been constructed independent of the Primer for the accommodation of those who are very much limited as to time. It is, however, strongly urged that the Primer be used where it is possible to do so. The lessons are shorter and simpler, and the gradation is less rapid than in the First Reader; hence, the first steps are easier alike for teacher and pupil. The demand for "more primary reading matter" is constantly increasing, and there are but few schools where it will not be a positive advantage to use both Primer and First Reader.

The plan on which the Primer is constructed is the simplest and best known. It applies to the First, Second, and Third Readers as well, and is as follows:

At the beginning of each lesson are placed all the new words and all the new elementary sounds to be found in that particular lesson, and no new word or element is given in a vocabulary that is not found in the particular lesson which it precedes. Omissions and repetitions alike have been carefully avoided in these vocabularies, and thus the teacher can tell, by a glance at the vocabulary, exactly what new work is to be mastered.

The articles *a*, *an*, and *the*, and the simplest words possible are first presented in both the Primer and

First Reader. New words are introduced on a carefully graded plan. The simplest elementary sounds (the short vocals, etc.) are presented first. The more difficult sounds, combinations, and substitutes are then gradually interwoven, and, by the time the Primer is finished, all the vocals, long and short; all the diphthongs; all the aspirates; all the subvocals except *z*, as in *azure*; and all the substitutes except *i* for *e*, as in *police*; *ch* for *sh*, as in *chaise*; *s* for *sh*, as in *sure*; *x* for *gz*, as in *exact*; *ph* for *f*, as in *phlox*; and *qu* for *k*, as in *pique*, have been presented. It will be noticed that these exceptions invariably involve words of difficult spelling, which should not be presented to the child until the end of the first or the beginning of the second year of his school course.

LESSON I.—Call the attention of the children to the two illustrations accompanying this lesson, the cat and the rat, and engage them in conversation about them. Such questions as, Who has a cat at home? What is her color? Does she catch rats? etc., etc., will soon awaken interest in the subject.

When the attention and interest of the children are secured, revert to the illustration in the book, and resume your questioning in some such way as follows:

Teacher.—Do you say that *this* is a cat? Can it run about? Can it mew? Can it drink milk? Can it catch mice and rats like your cat at home? Is it a real cat, then?

Children.—No.

Teacher.—Who can tell me, then, what this is? [*Pointing to the picture of the cat in the book.*]

If you do not succeed in drawing out the correct answer, ask the class if it is a *picture* of a cat. When

the answer is satisfactorily given, proceed with the next step.

Teacher.—You say this is a *picture* of a cat. It is not a real cat, but when you look at it you know at once that it means a cat. Who would like to see a picture of the *word* cat, that you have just pronounced? Pronounce the word cat again, all at once. Now—

Children.—Cat.

The teacher should now place the word on the board. When this is done, the teacher should resume, pointing to the word on the board:

Teacher.—There, children, that is the picture that stands for the word cat, just as this picture in the book stands for a real cat. How do you pronounce this word? [*Pointing to the board.*]

Children.—Cat.

Teacher.—Now, who can find a picture of this word cat in the book?

As the word occurs several times in Lesson I, call up several children, and see how many times each can find the word in the lesson. Be reasonably sure that all in the class are able to recognize the word at sight before going any farther.

Next call attention to the picture of the rat, and follow the same steps until the entire class is familiar with the word *rat* also. Then place both the words *cat* and *rat* on the board a number of times, and test the individual members of the class, seeing that each can readily pick out the right word when it is pronounced. Vary the exercise by letting one child pronounce one of the words for another to point out, and allow the entire class to correct errors. It will be found that this calling upon one member of the class to examine another will add greatly to the interest taken in the recitation.

When the two words are quite thoroughly mastered, it will be time to take up the combinations "a cat" and "a rat." Turn to the illustration, and ask:

Teacher.—Of what did you say this was a picture? Did you say "picture of cat" or "picture of a cat?"

Children.—Picture of a cat.

[NOTE.—This is simply to draw out the combination "a cat." In asking the question do not emphasize the *a*.]

Write "a cat" on the board, and teach the phrase as you did the single word; also, the phrase "a rat." Be very careful, in pronouncing the phrase yourself, not to give the *a* its long sound, "*a* rat," "*a* cat," and do not allow the children to do so. The *a* should have its obscure sound, as it has in ordinary conversation, when one says, "This is a cat; that is a rat," or as you would sound the *a* in *along*, *around*, *about*, etc. This is quite an important point; and, if neglected, the children, from the very beginning, acquire a drawling habit of reading that may take years to eradicate.

Drill the class on the phrases, so that they can readily distinguish each from the other, and from the simple words *cat* and *rat*.

We now come to the word *and*. Ask the children: "What are these animals we have been talking about?" If they do not answer as you wish the first time, persevere until they do, and you succeed in getting the natural answer, "A cat and a rat." Repeat their answer, and emphasize the *and* a little. Ask, "Who can tell which word we have not studied? Listen while I say it again: A cat and a rat." Give the answer in case the class fails, and place the word *and* on the board. Teach it as you taught the other single words. When

it is learned, and all the words and phrases can be distinguished instantly, it is time to combine the two phrases, and the children should be able to read them readily as printed in the book.

At the close of the first reading lesson, however short it may be made, begin the first lesson in writing as directed on page 13, and advance to the combination of written words into phrases and sentences as rapidly as the progress of the class will permit.

LESSON II.—In this lesson there are five new words to be learned.

Begin, as in Lesson I, with a pleasant talk about the illustration. Remind the children of the cat and rat in Lesson I, and have them point out the cat and the rat in the illustration of Lesson II. Make up a little story from the illustrations of Lesson I and Lesson II; or, better still, have the children make up a story of their own.

Ask who can point out the word *cat* in Lesson II; the word *rat*; the combination “a cat;” the combination “a rat.” Proceed in the same manner as in Lesson I.

In teaching the phrases “the cat” and “the rat,” care should be taken not to allow the children to drawl out, “t-h-e c-a-t,” “t-h-e r-a-t.” These phrases should be pronounced as in ordinary conversation, “the cat,” “the rat,” giving the *e*, in *the*, its obscure sound.

Write all the words and phrases contained in both Lessons I and II on the board promiscuously, and test the thoroughness of the work so far accomplished by having individual members of the class point out each word and phrase as it is pronounced by the teacher or by some other member of the class. Proceed as in Lesson I.

It is not thought necessary to give detailed instruction for every lesson in the book. If we have succeeded in showing in these first two lessons, and in the "General Remarks," Chapter V, the plan of instruction by the Combined Method, we are confident that any intelligent teacher can use it successfully without further aid.

LESSONS III AND IV.—These lessons present no difficulties that need farther suggestions, except a new sound of *s* in Lesson IV.

The teacher should call the attention of the class to the difference between this sound of *s* and the *s* in Lesson II. And it may be accepted as a general rule that whenever a new sound of a letter is introduced, it should always be compared with the sound or sounds of the same letter already learned. In this way, the children will soon become familiar with the force of the diacritical marks. Always teach digraphs as such, and never as two separate letters.

LESSON V.—Every fifth lesson in the book (except the fiftieth) is a review of the four lessons preceding; and, as far as has been possible, the new words of those four lessons are repeated in the review. These reviews are valuable, therefore, as tests of the thoroughness of the work done, and should be made the most important lessons in the book.

Hesitation on the part of a number of the class on a review lesson shows a fault somewhere; either the work has been pushed too rapidly, or some one lesson, perhaps, has not been thoroughly mastered. A little careful investigation will reveal the trouble, and the defect can be remedied, and should be remedied thoroughly, before proceeding with the next series of lessons.

LESSON VI.—In this lesson we have 's, the sign of the possessive, introduced. Teach its force, and see that the children fully understand it. In succeeding lessons, it is frequently used when the simple nominative is given in the vocabulary. The sound of *ð* in *dog* demands watchfulness. There is a tendency to pronounce this word as though it were spelled *dawg*. The words *frog*, *doll*, *log*, *God*, etc., are similarly mispronounced by many persons. This is not the proper sound of *ð*, and the same persons who mispronounce the above words would never think of giving the same sound to *ð* in such words as *fog*, *got*, *odd*, or *hod*. Insist on the proper sound of *ð* wherever it occurs.

LESSON XIX.—We would call attention to the sound of *a* in *fast*. The sound of *ä* is the most commonly mispronounced of all the *a* sounds, and the error is quite common, even among the best educated classes. Many who know better give this *a* the wrong sound through the force of habit and association and the lack of early training. The common error consists in giving *ä* as though it were *ă*, as in *fat*, for example. How many of your pupils make a difference in the *a* sound in *fat* and *fast*? On the other hand, the extremely broad *a*, as in *fall*, should be avoided. The word is neither pronounced *făst* nor *fäst*, but *fäst*, about midway between the two.

It would perhaps be well to make a list of the words containing this sound of *a* as the class meets them, and give a special drill on it from time to time.

LESSON XXII.—In this lesson, call particular attention to the difference in pronunciation of the words *of* and *off*. Both occur in the lesson. Refer to Lesson XIX for the phonic spelling of *of*.

LESSON XXIII.—In this lesson, *one* (*wun*) needs particular attention.

LESSON XXV. *Review*.—The word *doll* has been learned in Lessons XVI and XX. It is here given in the plural form, *dolls*. Other plurals have been learned by the pupils. If the class shows any hesitation over the word, pronounce it and explain the difference between *doll* and *dolls* in simple language.

LESSON XXVII.—The use of the hyphen is illustrated in this lesson as joining two separate words, *mill* and *pond*, making a compound word. See that it is thoroughly understood. A test of this will be afforded in reading the review, Lesson XXX, where *mill-wheel* occurs, and also in Lesson XLI, where *light-house* is given.

LESSON XXXIV.—With the close of this lesson, all the small letters of the alphabet have been introduced. If the capitals have been studied in connection with the small letters, as suggested, and also the script forms of both, this is the place for a thorough review of all the alphabets.

Notice the fact that none of the words in the vocabulary of this lesson, except *we*, are given in the following review, and the lesson should therefore receive particular attention.

LESSON XXXVI.—Explain the meaning of the quotation marks, which are here met with for the first time.

LESSON XXXVIII.—The quotation marks in this lesson need further explanation. Those in Lesson XXXVI indicated a simple quotation; these represent a dialogue in progress.

LESSON XLIV.—Particular attention should be given to the rather difficult words, *said* (*sed*) and *once* (*wuns*).

LESSON XLVIII.—Pay attention to *been* (*bin*).

LESSON XLIX.—The use of the apostrophe in *I'll*, *she'll*, and *don't* demands careful explanation. Write the words “I will,” “she will,” and “do not” on the board. Rub out the letters *wi* in *will*, in each case, and the *o* in *not*, and substitute the apostrophe, explaining that the latter takes the place of the letters omitted, or “stands for” them. This ocular demonstration will make the fact clear to the children without much talking.

LESSON LI.—Explain the hyphen and the acute accent in the word *ago*.

LESSON LII.—This lesson and Lessons XLVI and XLIX may be used to advantage as exercises for memorizing and speaking.

IV.

McGUFFEY'S FIRST READER.

IF the class has studied the Revised Eclectic Primer before taking up this book, the teacher will find the way clear for rapid advancement. The first ten lessons of the Reader contain only three new words (*fed*, *left*, and *pan*) not already studied in the Primer. In the next seventeen lessons, about half the words are new; among them, a dozen words of two syllables. These latter should not offer any particular difficulty, as a few words of this kind have been met with in the Primer. From this point forward, the proportion of new words and two-syllable words rapidly increases, affording an abundance of material for advance work. Attention will be called to any special difficulties that present themselves under the directions for each particular lesson demanding notice.

As before stated, the detailed instructions for the first lessons of the First Reader are in accordance with the Phonic Method. If a teacher prefers to use the Combined Method, it is presumed that the instructions for the first lessons in the Primer will be a sufficient guide for work in the Readers. On the other hand, teachers using the Phonic Method will be able, it is thought, to follow that method very easily in the Primer after consulting the following instructions for the First Reader.

As it can not be assumed that all teachers will use both Primer and First Reader, the detailed instructions

for the latter have been made as full as though the Primer had not been used. This fact will explain a few repetitions.

If the Primer is not to be used, it will be well to begin work with a few preliminary oral lessons, which may be conducted as shown in the following pages. If the teacher intends to use both the Primer and the First Reader, and to teach by the Phonic Method, lessons corresponding to the following should precede the Primer, and these lessons should be omitted.

Recognition of Sounds.—After the attention of the children has been gained, the teacher taps the table with a pencil, and explains to the children that what they hear is called a *sound*.

After repeating the same sound several times, the teacher tells the children to listen and he will make another sound. This may be done by tapping a bell or a piece of metal, and the children are led to distinguish between the two different sounds.

After a little practice of this nature, tell the children that the words which they hear and understand are sounds. Ask them whether, if they heard two sounds, one made by a dog, and one by a bird, they could tell from the sounds which one was made by the bird and which by the dog.

Tell them you are now going to try them, and see whether without looking they can tell you the different sounds you make. The children may shut their eyes, or stand with their backs to the teacher, or the teacher may make the different sounds behind the desk, asking after each, "What sound did you hear?" Answers like the following may be given: "The sound I heard was a tap on a bell." "The sound I heard was a t̄ap

on a book." "I heard a talk-sound." "I heard a sing-sound."

It will be found interesting and profitable to continue this practice in distinguishing sounds, in connection with the regular lessons, till the children catch the sounds readily and accurately. Each succeeding lesson should be a more severe test of the children's abilities than the one preceding.

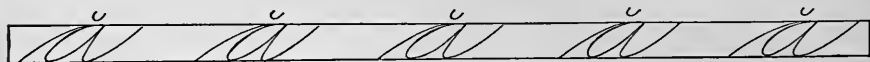
The Sound Represented by Short A.—In commencing to teach the elementary sounds in Lesson I of the First Reader, select one of the short vowels. If you select *ă*, you should follow it by *n* and *r*; if you select *ǒ*, you should follow it by *ġ* and *d*; that is, finish the word with which you begin before taking up the sounds of another.

Begin by asking the class to tell you some sounds they can make with their mouths. "We can sing." "We can talk." "We can whistle." "We cry sometimes." These may be some of the answers of the children.

The teacher says, "Now listen to me. I will make a sound." He gives the sound *ă*. The children repeat it, with the teacher, several times. Care must be taken that the sound is made short and pure. Have the children give the sound alone; the boys alone; the girls alone; the children in the front row; any one who will volunteer; and, finally, each child should be required to give the sound alone.

The teacher here explains that sounds can be heard but not seen, but marks may be made to stand for sounds. The teacher turns to the blackboard, and, between a head-line and a base-line, writes: ăăă. He explains to the children that when they see this they are to make the sound just learned. The children are

shown, next, how to make the character, and the teacher asks, "How many will try to make this on their slates?" Write the following copy carefully on the board, and have the children, at their seats, imitate it on their slates as well as they can:



After practicing for a time, the children should exhibit their slates to the teacher, who should point out the faults carefully and delicately, and should give farther explanations about writing, illustrating on the black-board. See page 13.

The word "Ran."—Teach the sound of *n* as you taught that of *ā*. Contrast the two sounds repeatedly, and see that the children can distinguish them readily and can produce them.

Write the character *n* on the board as copy for a writing lesson. It may be practiced a part at a time, if thought desirable, as follows:



When the children can give the sounds and write the characters *ā* and *n*, teach them to sound and write their combination, *ān*.

Teach the sound and form of *r*, and then the word *rān* as a whole.

The word "Dog."—Teach the word *dōg* in the same gradual way that you taught *ran*, and in the same order, viz.: the sound of *ō*; its written character; the sound of *g*; its written character; the sound of the combination *ōg*; the written combination *ōg*; the sound of

d; its written character; the sounds of *dōg*, as a whole; the written word as a whole.

The word "The."—Do not attempt to teach the elementary sounds composing *the*, as the obscure sound of *e* is too difficult to introduce at this point. It is absolutely necessary to introduce the articles *a*, *an*, and *the* early in the course on account of their constant occurrence in even the simplest sentences; but they should be taught, as before suggested, only in combination with the words which follow.

After the word *dog* has been learned, teach by sound the phrase, "the dog." Be very careful not to accent the *the*, or to give the *e* its long sound, thus: "thē' dōg," but pronounce the words naturally, as you would in enumerating "the dog, the cat, the rat," etc., giving the *e* its obscure sound, and letting the accent fall on *dog*. This is quite an important point, as *the* should never be pronounced in combination in any other way than that here laid down, and if the children are allowed to hear or to pronounce the words "thē' dōg," etc., they will fall into the habit of drawling, which will be very difficult to overcome.

Write the combination on the board with and without the capital T, thus: "The dog, the dog." Pronounce the phrase, and have the children pronounce it after you correctly, both in concert and individually, as you point it out on the board. Do not say any thing about capitals and small letters at this point. Simply say that *The* and *the* mean the same thing, and drill the children until they can recognize each by itself and in combination with the word *dog*. Have the pupils write the phrases on their slates.

Finally, teach the complete sentence, "The dog ran."

Length of Lessons.—It is impossible to make any arbitrary division of these preliminary lessons. Each teacher must decide for himself as to the length of the lessons, as circumstances dictate. But the caution may be repeated not to attempt too much in one lesson; at the same time, introduce enough new matter to keep the children interested. Each lesson in this preliminary work should commence with a review of all that has already been learned.

LESSON I.—The transition from script to the printed forms usually presents but little difficulty to children. After two or three lessons, they read one form as readily as the other.

When the written characters of the several elementary sounds and words of the first lesson are well learned by the children, write the complete list on the board, and under each written character and word make its corresponding printed form, being careful to insert all the diacritical marks in both forms. Drill the class on these printed forms at first in connection with the written forms; then rub out the written forms, and drill on the printed forms alone.

When the printed forms of all the characters and words can be pointed out as soon as sounded, and sounded as soon as pointed out, have the children open their books and read Lesson I.

Correct drawling and hesitation at once. Do not let a child say, "Th-e' d-aw-g'. Th-e' d-aw-g' r-a-a-n'." See that each child says, "The dog'. The dog' ran'," promptly and naturally, as they would in speaking, the

moment the combinations are presented to the eye. It is essential to enforce this point from the beginning.

There is a strong tendency in some localities to pronounce the word *dog* as though it were spelled *dawg*. The words *frog*, *doll*, *log*, *God*, etc., are similarly mispronounced by many persons. This is not the proper sound of *ð*, and the same persons would never think of pronouncing the words *fog*, *got*, *odd*, or *hod*, in the same way. Insist on the proper sound of *ð* from the beginning, and wherever it occurs.

LESSON II.—In this lesson we have four new words and five new elementary sounds.

Teach the new elementary sounds, words, and combinations, as in Lesson I. The vocabularies invariably contain *all* new words and sounds, so they will not have to be sought for in the text.

Illustrate the use of the word *on* by placing your book, pencil, etc., on the desk, on a chair, on your hand, etc., and ask in each case *where* it is. When the class understands the force and meaning of the word, teach its written form in the usual manner.

When satisfied that all can recognize the *printed* new characters and words at sight, have the lesson read from the book.

Explain the interrogation point. Tell the children that when they see that mark they may always know that a question is asked. Have them read the question, "Is the cat on the mat?" giving the proper rising inflection on the last word. Then have them read the answer with the downward inflection at the close, and with the proper emphasis on *is*. The proper expression in this case, and in similar ones, can usually be elicited from the children by a few well-put questions which

teachers call "thought study;" as, "What is on the mat?" "Where is the cat?" "Is the cat under the mat?"

Do not allow a child to read the question and answer in the painfully monotonous way so often heard in primary classes, with pauses between each word, and with the rising inflection on each word but the last, as follows: "Is'—the'—cat'—on'—the'—mat'?" "The'—cat'—is'—on'—the'—mat'." Insist on having both question and answer read in the same natural tones that the child would employ in speaking. If the class fail to read the question properly, have the books closed, and select some pupil to ask the question and another to answer it. Do not show them how to do it, and have them imitate you. That is simply "parrot work," words without thought, and the very worst of all bad methods. Tell one pupil to ask another if the cat is on the mat, just as though he really wished to know, and tell the second pupil to answer, not by "yes" or "no," but in full, either that the cat is or is not on the mat. When this has been done properly, have the entire class ask and answer the question, and then have it *read* in precisely the same tones. Constant attention to just such points as this leads the children to think for themselves, and they soon become intelligent and agreeable readers.

If spelling be taught orally at all, it should be confined, in primary classes, to the words of the reading lessons, and should invariably be combined with written exercises on the same words (see page 22). Some teachers prefer to use oral as well as written exercises in spelling, claiming that the former assists some children to remember the words they have learned. It also

assists in articulation, by requiring the child to name the letter and then give it its proper sound.

Word building, as suggested on page 59, should be begun as soon as possible; and, after some progress has been made, it will be found interesting to the children to write the thoughts in a lesson, sentence by sentence, in their own words. This is a capital exercise, as it soon teaches a child to use his vocabulary properly, and to discover the expression through the thought.

When the class is far enough advanced to have the reading lesson assigned for study before recitation, call attention to such points as will be likely to excite curiosity and interest. It is unwise to read the lesson in full, as is sometimes done. The children should be left to do as much work as possible for themselves. It is hardly necessary to say, perhaps, that there should be a daily review of each lesson of the preceding day.

The detailed instructions for Lessons I and II are presumed to be a sufficient guide for succeeding lessons. In the latter, therefore, attention is called merely to those points which demand particular instruction.

The "General Remarks," Chapter V, apply equally to Primer and First Reader, and, usually, to the Phonic as well as to the Combined Method. They should be read before commencing work on the first reading lesson, whether it be in the Primer or the First Reader.

LESSONS III, IV, V.—Nothing demanding especial attention is met with in Lessons III and IV. In Lesson V, there is a new sound of *e* and a new sound of *s*. Call the attention of the children to the short sound of *e*, as in *pen*, Lesson III, and contrast it with the long sound of *e*, as in *see*. Compare the sound of *s*, in *see*, with the sound of *s*, in *is*, Lesson II.

Here, also, we have two words containing *silent* letters,—*Ann* and *see*. These should be explained in very simple language. Tell the children that *Ann* is pronounced just as though it were printed *An*, and *see* just as though it were printed *se*. Illustrate by writing the two words on the board as they are properly spelled, and then cancel the silent letters by drawing a line through them.

The digraph *ch* should be taught as one element, and we may give this instruction generally in regard to all digraphs. Also, wherever a new sound of a letter is met with, whether vowel or consonant, it should invariably be contrasted with the sound or sounds of the letter previously studied; and in making these comparisons, the letters, with their *diacritical marks*, should always be written or printed on the board. In this way, the children will soon become familiar with the force of the diacritical marks.

The exclamation point is first met in Lesson V. Call attention to it, and teach its meaning.

LESSON VI.—There are three digraphs in the vocabulary. Double *o* long has its peculiar sound, differing from simple *o* long. It will not do to treat it, therefore, as we did double *e* in Lesson V, where practically one *e* is silent and the other has the identical sound of long *e*.

For the combination *ow*, here and in all other cases, see “Suggestions to Teachers,” page 2 of McGuffey’s Revised First Eclectic Reader.

LESSON VII.—The silent *g*, in *eggs*, affords opportunity to review the instructions on this point, and to test the understanding of the class.

LESSON IX.—This is the first review lesson, and should receive careful attention. All the words em-

ployed have been given in preceding vocabularies. This is true of every review lesson in the book. Hesitation, therefore, on the part of any considerable number of the class, on a review, indicates a fault somewhere. Either work has been pushed too rapidly, or some one lesson, perhaps, has not been thoroughly mastered. A little careful investigation will generally reveal the trouble, and the defect can be remedied, and should be, before proceeding with the next series of lessons.

LESSON XI.—By the time the class has finished this lesson, they have met with all the small letters of the alphabet except *q* and *z*. As these two letters are but little used, and are introduced very much later in the book, it is suggested that at this point a thorough review be given of the alphabets, large and small, printed and script, excepting these two letters. If the teacher so prefers, these two letters may also be taught in connection with this lesson, which is quite a simple one. If the class has previously studied the Primer, of course this review of the alphabets will be unnecessary.

LESSON XII.—*Kitty* is the first word of two syllables in this book. The accent should be explained and vocal illustration given. The combination *ng* is rather difficult and needs especial care.

LESSON XIII.—Explain in simple language the use of the 's as denoting possession. Drill carefully on *n*.

LESSONS XVII AND XVIII.—The lessons are intended as especial drills on script. They should be *written* by each member of the class as well as read. This instruction applies to similar lessons throughout the book.

LESSON XIX.—The sound of *a* is the most commonly mispronounced of all the *a* sounds, and the error is quite common, even among the best educated classes.

Many who know better give it the wrong sound through the force of habit and association, and the lack of early training. The error lies in giving *ă* as though it were *ǎ*. On the other hand, the extremely broad *ā*, as in *fall*, should be avoided. The word is neither pronounced *grăss*, nor *grass*, but *gräss*.

It would be well to make a list of the words containing this sound of *a* as the class meets them, and give a special drill on it from time to time.

LESSON XXI.—Here we have a very unusual substitution of *e* for *ĩ* in the word *pretty*, which is frequently mispronounced *prēt'ty* in place of *prīt'ty*.

LESSON XXIV.—Teach in simple language the use of the hyphen at the end of the first line of this lesson.

LESSON XXV.—The combination *ai* is not recognized as a substitute for *ě*. The word *said* is therefore respelled in order to give its proper pronunciation. Teach the use of the quotation marks, which are here introduced.

LESSON XXVIII.—The word *can't* presents two difficulties,—its pronunciation and the mark of abbreviation.

While the word *can* has the short *α*, it will be noticed that in *can't* the *a* is pronounced like *a* in *farm*. The proper pronunciation should be insisted upon as often as the word is used by a pupil in the teacher's presence.

To explain the abbreviation mark, write the words "can not" on the board; then rub out the *no* of *not*, and write the apostrophe in their place, explaining that it stands for the omitted letters. Test the class in the use of the hyphen in the line next to the last in the lesson.

LESSON XXX.—The word *won't* is a peculiar contraction of “will not” or “woll not” used colloquially. In New England it is sometimes pronounced as though spelled *wunt*. A full explanation of the derivation of the word would probably not be understood by young children. It will be sufficient to explain that the apostrophe stands for an omitted *o*, in the word *not*, which helps form the compound. It will be noticed that the quotation marks in this lesson are used to indicate a continued conversation, differing from previous cases in the omission of the person relating the conversation. See that the children understand that two persons are speaking, and when one ceases and the other begins.

LESSON XXXI.—The past tenses, *called* and *jumped*, are the first words of their form that are presented. They may be mistaken for words of two syllables. Teach that the *e* in both words is silent. Attention should be called to a new use of the capital letter at the beginning of a quotation, as in paragraph seven: “Kate said, ‘Good old Ponto!’” Heretofore the capital has been used only as the initial letter of a proper name and of the first word of a sentence.

LESSON XXXII.—The word *says* is respelled, since *ay* is not recognized as a substitute for *ě*. The letter *z* is first presented in this respelling. If it causes any difficulty, substitute *ſ* for *z*, thus: *seſ*.

LESSON XXXV.—Test the knowledge of the class on the use of the apostrophe in *I've*. If no one can tell for what letters it stands, write the words “I have” on the board, and have some pupil erase the proper letters without prompting. Assign compositions in which the children are to use the abbreviations *I've*, *I'll*, *I'd*, *I'm*, etc.

LESSON XXXVI.—This lesson presents another word requiring respelling in order to show its proper pronunciation. *Been* is often improperly pronounced *ben*.

LESSON XXXVII.—The word *one* needs particular attention. The main difficulty with these words of arbitrary pronunciation is in the *spelling*, but if the daily writing exercises are conducted in the manner we have advised, they soon become fixed in the memory, and present little trouble.

LESSON XXXVIII.—Be careful about the word *bàs'-ket*; it is generally mispronounced *băs'ket* or *băs'kit*.

LESSON XXXIX.—In the second line of this lesson we have the compound word *easy-chair*. Its component parts only are given in the vocabulary. Call attention to this use of the hyphen, and illustrate with other words on the blackboard; for example, *market-basket*, derived from the preceding lesson.

LESSON XL.—See that the quotation marks in this lesson do not lead to confusion as to who is speaking. The mother is speaking throughout the third, fourth, and fifth paragraphs. The laws of punctuation require that quotation marks should be placed at the *beginning* of each of these paragraphs, but at the *close* of the last one only. The danger is that the young child may imagine that the person speaking changes with each paragraph, and confusion naturally follows.

This lesson affords a good opportunity for the teacher to test the thinking power of the children. This should be done by pertinent and searching questions.

LESSON XLIII.—In this lesson is presented an excellent drill on the different sounds of *a*. In the fifth line, "At half past eight," we have first *ă* in *at*, then *ä* in *half*, *â* in *past*, and *e*, a substitute for *ā*, in *eight*.

Drill on this phrase, and see that the four distinct sounds of *a* are clearly given.

Test the class in the use of the hyphen in line six of page 58. The words *bed* and *time* have been given separately in Lessons XXIV and XXIX.

LESSON XLIX.—See that *often* is pronounced *of'n*. Both the *t* and the *e* are silent.

LESSON XLVIII.—The letter *q* is here introduced, completing the alphabet. Teach that *q* is always followed by *u*; the combination has two sounds: that of *kw*, as in *quiet*, and that of simple *k*, as in *pique*.

LESSON XLIX.—Teach that underscored words in writing mean the same thing as words printed in *italics*; that is, both are to be emphasized in reading. By careful “thought questions” on the part of the teacher, the children can be led to discover the proper word or phrase to be emphasized.

LESSON L.—*Läugh'ing* is rarely pronounced properly, the *a* being given generally as a prolonged sound of short *a*; as, *lä-ä-äf'ing*, or like ä. Have it pronounced like *a* in *fäther*. Illustrate by pronouncing the two words a number of times alternately, dwelling a little on the *a* in each case to impress the sound.

LESSON LV.—The word *again* is commonly mispronounced. “Poetic license” is frequently taken with it, even by many of the leading poets. Nevertheless, the only *proper* pronunciation of the word is *agën'*. It should never be pronounced *agün'*.

LESSON LVI.—The seasons, spring, summer, autumn, and winter are frequently written incorrectly with a capital. The opportunity for teaching the proper method occurs in correcting the writing exercise accompanying this lesson. Do not teach or even say what the

wrong form is, but if any pupil writes *spring* with a capital, call him up quietly and point out his error.

LESSON LVII.—Call attention to the difference between the spelling, pronunciation, and meaning of *of* and *off*.

LESSON LIX.—Here we have the unusual occurrence of two silent letters in one syllable, making *whistle* a little difficult to spell.

LESSON LXII.—*Really* is the first word of three syllables presented to the children.

LESSON LXIII.—Be careful about the word *pâr'ents*; it is frequently mispronounced *pā'rents*.

Phonic Chart.—The chart is presented for the purposes of drill, and can be used at the discretion of the teacher as time and circumstances dictate. It is suggested that the entire school, either as a body or in separate classes, spend from three to five minutes in exercising on the elementary sounds. It will be time well spent.

V.

GENERAL REMARKS.

GREAT care must be taken not to attempt too much in any one lesson. Here the teacher must be guided by his judgment as to the intelligence of his class, and no specific directions can be laid down. In general, we would say, do not wait until you see the class becoming weary and the interest flagging. Stop while all are fresh and zealous. It is much better to err on the side of brevity than of its opposite.

It is well to be thorough, and to make sure of one step before taking another, but do not make the mistake of going to the opposite extreme, and dwell on one topic or one lesson until the children are weary and disgusted with it.

Analysis.—If you are using the Combined Method,* when the class has made some progress, say at the end of the first review, Lesson V of the Primer, begin the work of analyzing into their elementary sounds the words already learned and fixed in the mind.

At first this work may prove quite difficult, and the results discouraging, but patience and perseverance will accomplish wonders in a few lessons properly taught, and it will be found that children take great interest in this branch of their study. The great trouble in the

* The Phonic Method is synthetic, and does not admit of exercises under this head.

teaching of Phonics is that many teachers are themselves unable to do what is required of the children: they adopt an unnatural tone, and distort the word under study so that, as a matter of course, the children fail to recognize the most familiar words. The teacher, then, should give the subject careful attention, and not attempt to teach a class until he is certain of his own ground. If understood, the subject of Phonics is very simple and very easily taught; moreover, it is of great assistance to the child in acquiring new words, and should therefore not be neglected.

We here introduce the method of treating the words found in Lesson I. Commence by pronouncing for the class the word *cat* rather slowly, in a perfectly natural tone, and with very distinct articulation, giving each letter its full value. Ask the class what the word is. It will, or should be, recognized at once. Pronounce it more slowly and with the same care, and have the class imitate you. Repeat the word a number of times, each time more slowly than before, the class always imitating you, until you have in this manner separated the word as nearly as possible into the elementary sounds *c*, *a*, *t*. Care must be taken that the *c* and *t* are not slighted, and the *a* prolonged into a drawl, thus: *c-a-a-a-a-t*. Dwell equally on the *c*, the *a*, and the *t*, and insist on the class doing the same thing. Call up individuals until you are sure that all have the idea; then say, "Listen carefully, children, while I pronounce the word *cat* as you have just done, and see who can give me the first sound that I make."

Pronounce the word, making almost an entire separation between the *c* and the *a*. If all fail to recognize it, give the *c* sound alone and have the class imitate

you. Follow the same plan with the *a* and *t*, and drill until the class is familiar with the three elementary sounds. Now have the children pronounce the word very slowly, as before, and tell them that you will write on the board the letters that stand for the sounds as they give them; then, as they pronounce *c-a-t*, write the word *with the diacritical marks*. Reverse the process, and have the children give the sounds as you write the letters.

Treat *rat* and *and* in the same way. The class should now be able to give all the elementary sounds of the first lesson. The characters representing these sounds are given in the vocabulary at the head of the lesson. Drill the class on these until the characters and their sounds are instantly associated in the minds of the pupils, so that when a sound is given they can at once point out its character, and when a character is pointed out they can at once give its sound. Continue these exercises throughout the book.

Synthesis.—When the children have grasped the idea of analysis, and can readily resolve simple, familiar words into their elementary sounds, teach them how to reverse the process, and build up new words from the sounds they have learned.* This will afford interesting and profitable occupation for them at their desks. For example, from the elements given in the first four lessons of the Primer can be formed the following simple words not found in the vocabularies: *Mat, that, map, rap, mad, had, Sam, pat, than, nap, tap, pad, ham, fat, pan, lap, sap, sad, ram.*

* Exercises in word-building may be commenced at once when the Phonic Method is employed.

Show the children how to build these words in phonic order. Thus, the word *cat* is given in Lesson I. Write it on the board, and have the class pronounce it. Then, rubbing out the *c*, ask: "Now, children, who can tell me what sound to make to change *cat* to *pat*?" Pronounce the word *pat* several times, giving the *p* sound emphasis, until some of the class indicate that they recognize the sound necessary to make the change. Select one of the pupils to give the sound of *p*. When it is given correctly, write both *cat* and *pat* on the board, at one side. Form *fat* and *that* in the same way, and write them in the column under *cat* and *pat*.

Then, taking the words *ran*, in Lesson II, and *cap* and *lad*, in Lesson IV, as bases, form *than*, *pan*, *map*, *nap*, *lap*, *rap*, *tap*, *sap*, *mad*, *pad*, *sad*, and *had*. Write these words on the board in columns as they are formed, putting each under its proper base word. The remaining words are more difficult, for although the elements forming them are given, we find no word in the vocabularies to take as a basis, as we did in forming the other words. However, this will not be necessary after a few lessons, and the children will in time be able to form new words without the teacher's assistance. The new words thus formed must be those which belong to the ordinary vocabulary of the child. The children will recognize them at once as familiar, and will join in the exercises with zest. The spirit of competition as to who can make the most new words will arouse the interest of the class, and every new lesson will broaden the field, so that work in this direction will never grow monotonous.

Place the new words formed in each lesson on the

board, and have the children use them by combining them into phrases and sentences, which should be written on their slates and read aloud.

Diacritical Marks.—This is the proper place to begin the study of the diacritical marks. They should be used in the work of analysis every time the teacher or a pupil puts a word on the board, and the pupils should be required to use them in such slate exercises as are given them to perform under this head.

The accurate knowledge of the power of all the diacritical marks, as well as the mastery of all the sounds of the letters representing them, is necessary for the intelligent use of the Dictionary and the acquirement of a correct and elegant pronunciation.

NOTE.—The elementary sounds of the English language are frequently represented by characters other than the primary ones which give them name; thus, long *a* is represented not only by *ā*, but also by *ē*. A list of the ordinary substitutes, as recognized by Webster, will be found on page 96 of the First Reader; but unusual substitutes are sometimes encountered; as, for example, *e* or *ee* for *ī*, as seen in *England* and *been*. Often, too, *combinations* of letters are met with which seem to represent the elementary sounds. On examination, these combinations are frequently seen to consist of the primary character, or one of its substitutes, and *silent letters*. For example, the only substitute given for *ā*, in the list on page 96, is *ē*; but we have the sound of *ā* in *they*, *sleigh*, *vain*, *gauge*, *break*, *may*, *gaol*, *boquet*, etc. If we analyze the above combinations, we find that in every instance either *ā* or *ē* really represents the sound, and that the other letters of the combination are simply not sounded. We have marked the silent letters in the examples quoted by making them italics. In *boquet*, the second *u* is in combination with *q* to form the sound of *k*, and is therefore not marked silent.

Unusual substitutes and silent letters in combination are often confusing, and for the convenience of teachers we here insert a table for reference, presenting a complete list of the characters

representing the elementary sounds, both primary characters and their substitutes, with Webster's diacritical marks, and also the ordinary combinations of silent letters with the various sounds.

The character or several characters representing each sound are italicized, as also are the silent letters used in combination with those characters. Other silent letters are unmarked in this way to avoid possible confusion. Only one example of each substitute and combination is presented.

VOWELS.

ā, as in *hate*.—*Break, jail, gaol, gauge, may, feint, sleigh, they, bouquet, café.*

ǣ, as in *cat*.—*Plaid.*

â, as in *ask*.

ȃ, as in *what*.—Substitute for ǒ.

ā, as in *harm*.—*Ah, aunt, guard, hearth, sergeant.*

ȃ, as in *ball*.—*Haul, groat, or, bought.*

â, as in *care*.—*Pair, prayer, bear, heir, e'er, there.*

ē, as in *be*.—*Cæsar, leave, quay, see, seize, belief, people, key, machine, physique.*

ĕ, as in *set*.—*Any, said, says, feather, heifer, leopard, friend, bury, guess.*

ê, as in *there*.—Substitute for â.

ē, as in *feint*.—Substitute for ā.

ẽ, as in *err*.—*Earnest, hauteur, sir, worm, journey, burn, myrtle, colonel, avoirdupois.*

REMARK.—Webster makes a slight difference between *e*, as in *err*, and *u*, as in *burn*, or *y*, as in *myrtle*. The ẽ is a compromise between ĕ and the *u* or *y* sound in the examples quoted.

é as in *café*.—Substitute for ā.

ī, as in *mice*.—*Aisle, height, vie, eye, choir, guide, sigh, fly, buy.*

ĩ, as in *hit*.—*Been, pretty, sieve, women, tortoise, chamois, busy, guinea, myth.*

ï, as in *machine*.—Substitute for ē.

ĩ, as in *sir*.—Substitute for ẽ.

ō, as in *fold*.—*Beau, hautboy, chevaux-de-frise, foam, yeoman, hoe, floor, shoulder, sew, low, owe.*

- ð, as in *nod*.—What, *knowledge*, *centime*, *mademoiselle*.
 ð̃, as in *worm*.—Substitute for *ẽ*.
 ò, as in *son*.—Substitute for *ũ*.
 ô, as in *or*.—Substitute for *ą*.
 ȝ, as in *to*.—Substitute for *ōō*.
 ȝ, as in *wolf*.—Substitute for *ōō*.
 ōō, as in *soon*.—*Rheum*, *drew*, *canoe*, *manoeuvre*, *denouement*,
group, *through*, *to*, *two*, *rude*, *rue*, *recruit*, *ticdouloureux*.
 ōō, as in *foot*.—*Wolf*, *would*, *put*.
 ū, as in *cube*.—*Beauty*, *feudal*, *pew*, *lieu*, *view*, *cue*, *suit*, *you*, *ewe*.

REMARK.—Care must be taken not to pronounce *ū* like *ōō*. It is *cube*, not *coob*; *tube*, not *toob*; *tune*, not *toon*.

- ũ, as in *but*.—*Son*, *does*, *porpoise*, *blood*, *touch*.
 û, as in *burn*.—Substitute for *ẽ*.
 ȳ, as in *rude*.—Substitute for *ōō*.
 ȳ, as in *put*.—Substitute for *ōō*.
 ȳ, as in *fly*.—Substitute for *ī*.
 ȳ, as in *myth*.—Substitute for *ī*.
 y, as in *myrtle*.—Substitute for *ẽ*.
 oi, as in *boil*.—*Poignant*, *oyster*.
 oi, as in *loir*.—Substitute for *wä*.
 ou, as in *out*.—*Plough*, *owl*.
 ow, as in *low*.—Substitute for *ō*.

CONSONANTS.

- b, as in *bad*.—*Babe*.
 e, as in *cat*.—Substitute for *k*.
 ç, as in *cede*.—Substitute for *s*.
 ch, as in *church*.—*Righteous*, *nature*, *question*, *cicerone*.
 eh, as in *chorus*.—Substitute for *k*.
 çh, as in *chaise*.—Substitute for *sh*.
 d, as in *dot*.

REMARK.—This letter is never silent except in *Wednesday* and *handkerchief*.

- f, as in *fate*.—*Phrase*, *sapphire*, *draught*.
 ġ, as in *get*.—*Ghost*.

ġ, as in *gem*.—Substitute for j.

gs.—This combination is represented by x, as in *exist*.

h, as in *he*.—*Who*.

hw.—This combination is represented by *wh*, as in *what*.

j, as in *Jack*.—*Gem*, *rage*, *soldier*.

k, as in *kite*.—*Cat*, *chorus*, *sick*, *antique*, *hough*.

ks.—The combination is represented by x, as in *expect*.

kw.—This combination is represented by qu, as in *queen*.—*Choir*.

l, as in *light*.—*Fell*.

m, as in *more*.

n, as in *nine*.—*Knee*.

n, as in *linger*.—*Uncle*, *link*.

ng, as in *singer*.—*Bring*.

ñ, as in cañon (Spanish).—Substitute for (n) y.

p, as in *pup*.—*Hiccough*, *diphthong*.

q is always followed by u, and the combination qu is a substitute for kw or for k, as *queen*, *antique*.

r, as in *red*.—*Ore*, *wrong*, *poorer*.

REMARK.—The middle r of *poorer* has a double sound.

s, as in *same*.—*Cede*, *trace*, *chintz*.

s, as in *was*.—Substitute for z.

sh, as in *shut*.—*Oceanic*, *Asia*, *negotiation*, *ocean*, *social*, *nauseous*, *tension*, *patient*, *noxious*, *sure*, *passion*, *luxury*, *chaise*, *conscientious*, *conscience*.

t, as in *tone*.—*Hissed*, *Thomas*, *phthisic*.

th, as in *thing*.

th, as in *with*.—*Eisteddfod*.

v, as in *vane*.—*Leave*, *of*, *Stephen*.

w, as in *wet*.—*Assuage*.

wh = hw, as in *what*.

x = ks, as in *expect*.

x = gs, as in *exist*.

y, as in *you*.—*Familiar*, *hallelujah*, *cañon*.

z, as in *zone*.—*Was*, *says*, *clothes*, *muse*, *sacrifice*, *discern*, *xanthic*.

zh.—These letters are never written together, but the sound of the combination is heard in *azure*, *menagerie*, *bijou*, *rouge*, *measure*, *transition*.

NOTE.—Some words differ so radically in their written characters, and the sounds which compose them, that their pronunciation can be indicated most readily by respelling them: as, for example, *once* (*wuns*). Words of this class are therefore respelled in the vocabularies of the Readers.

Script Exercises.—In copying the script exercises, and also in writing the regular reading lessons, see that the children use capital letters wherever they appear in the books, and that they insert the proper punctuation marks. It is a mistake to allow young children to write without attention to both these points. If they are required to observe them from the beginning, the rules governing them will be readily understood when the proper time comes to study them.

Capital Letters.—The rules for capital letters are simple, and the principal ones should be taught orally early in the course. See Harvey's Revised English Grammar, pages 14-17, Rules I, IV, V, VI, VII, IX, X, XI, and XV.

Punctuation.—The subject of Punctuation is a very difficult one to understand in all its bearings, and no attempt should be made to teach its formal rules in primary classes. A few of the marks, such as the period, interrogation point, exclamation point, hyphen, and quotation marks should be explained briefly, and in simple language, as they are met with in the text. The semicolon and comma, especially the latter, involve many rules, exceptions, and exceptions to exceptions. The consequent complications are understood by very few teachers, and it is absurd to try to teach them to little children. It is sufficient to answer, should the children ask what they mean, that they are marks used to help us understand the meaning of the writer.

Many teachers seem to have no idea that this is the purpose, and the *only* purpose, of punctuation. They seem to think that the various marks are used to indicate *rhetorical* pauses, and make the children pause and count one for a comma, two for a semicolon, three for a colon, and four for a period. It would be just as sensible if they continued the "system," and counted five for an interrogation mark and six for an exclamation point. This counting is not only ridiculous, but it aids to defeat the very object of the reading lesson. It distracts the child in his endeavor to grasp the meaning of the sentence he is reading; whereas, he should be left perfectly free to concentrate his mind on this one point, and when he does get the meaning of the sentence clearly, its proper expression will follow naturally without artificial aids.

Constant attention should be paid to articulation and pronunciation. Do not allow a child to say *fas* for *fast*, *goen* for *going*, *agin* or *agūn* for *again* (*agen*), etc. Daily drill on the Phonic Chart (pages 95 and 96 of McGuffey's Revised First Reader) will accomplish more in this direction than many teachers seem to imagine. This exercise need not take more than from five to ten minutes of each day, and the entire school may be drilled together. Only one or two sounds should be studied at a time.

Do not carry preciseness in articulation and pronunciation to the extreme of interfering with a child in his endeavor to grasp the thought of what he is reading, however, for the latter is the important aim, and should take precedence of all others. If a child makes an error in articulation or pronunciation while reading, do not interrupt him yourself, or allow him to be inter-

rupted by other pupils, until he has finished; then call his attention to the mispronounced word, and have him give it correctly.

Correct all errors the children make in pronunciation in all conversational exercises. To pronounce correctly is of even greater importance than to spell well, for where one word is written many are uttered in conversation. A correct pronunciation is counted as a mark of culture.

If the class shows a tendency to read in a monotonous manner or in an unnatural tone, have the books closed, and set the children to *talking* about the lesson. Lead them to express a sentence in the words of the book; then have the same sentence read from the book. In this way, the children may be led to see for themselves the difference between a natural and an unnatural manner of reading.

Where the Combined Method is employed, the use of the illustrations in the language lessons preliminary to a reading lesson should be continued until the children have acquired the faculty of associating new words and the ideas they represent without such aid. It is a mistake to continue this method after it has ceased to be necessary, as it then retards rather than assists. Just when the method should be dropped, depends largely upon the intelligence of the class, and each teacher must use his own judgment in the matter.

It is probable that you will find some pupils in the primary classes who have already had some instruction in reading by the alphabet or spelling method. These will be very apt to stop in their reading to *spell* doubtful words. This should be stopped at once. Neither should a child be allowed to *guess* at a word. Both of

these faults show plainly that the word recalls no definite idea to the child's mind; that is, that the idea and its symbol are not instantly associated, as the fundamental principles of all correct methods demand that they should be.

Before the children are called upon to read the lesson, the teacher should have reasonable assurance that the new words have been studied by the children. This is necessary to avoid hesitation, and hesitation is the source of many bad habits.

VI.

McGUFFEY'S READERS.—CONCLUDED.

McGUFFEY'S SECOND READER.

WITH the completion of the Primer and First Reader, the children have acquired a vocabulary of more than seven hundred words; and if the drill on phonics has received proper attention, they should be able to read new matter composed of simple words, with little hesitation. In the Second Reader, therefore, another feature is introduced. It will be noticed that each lesson is in itself instructive, either intellectually or morally. The domestic virtues, morals and manners, letter-writing, natural history, and physics, receive much attention, and open a wide and very interesting field for object lessons and original compositions. The intelligent and conscientious teacher will not neglect the opportunities afforded for imparting much useful information in connection with these lessons; but it should be borne in mind that the *first* object is to lead the children to think for themselves, and to produce as much original work as possible. This work should then be supplemented by the teacher: wrong ideas should be carefully corrected, and such additional instruction given as the teacher may think within the understanding of the class. Care must be taken as to the last point. Keep on the safe side, and never talk “over the heads”

of the little ones, otherwise your time is thrown away, and interest is lost.

The same attention should be given to phonics and the diacritical marks as heretofore, and to articulation, expression, and the daily writing of a portion of the reading lesson. Paper and lead pencil, or pen, may be introduced in place of the slate. The teacher who continues these writing lessons as suggested, will be well repaid in finding that the class fall naturally into the proper spelling of words, and the proper use of capitals and the various punctuation marks, without special drill upon these subjects. Then, as before stated, when the proper time comes to study the formal rules, they will be readily understood and remembered.

It is suggested that the teacher, in drilling on pronunciation, write each day's vocabulary on the board, with the proper syllabication, diacritical marks, and accentuation, and have each word pronounced by the class in concert and individually, distinctly and correctly. After a short drill of this nature, write the words without division into syllables, and without diacritical marks or accents, and again have the words pronounced as before.

The teacher should always explain to the class the meaning of any words which he thinks may possibly be misunderstood before assigning an advance lesson to be studied, and the class should be carefully questioned on these words when the lesson is recited. Making sentences from given words is a valuable exercise to secure the proper use of words. It is a good test of the child's comprehension of their exact meaning.

LESSON I.—The abbreviations *Mr.* and *Mrs.* are introduced in this lesson. As suggested in the preface, these should be carefully explained, not only as to their mean-

ing and use, but as to the reason for their use. Write the words *Mister* and *Mistress* on the board; explain that the latter came in time to be shortened to *Missis*, and that it is now customary to write *Mister*, *Mr.*; and *Missis*, *Mrs.*

LESSON II.—This lesson will afford a good opportunity for an object lesson on the various colors. The teacher should provide himself with a prism, and, if it is a bright sunshiny day, throw the colors on the wall, where they can be pointed out. He should also have a small brush, and the water-colors red, blue and yellow; then, by mixing red and blue, blue and yellow, and yellow and red, he should illustrate how the secondary colors, violet, green, and orange, are formed. Teach that the absence of all color makes an object *black*, and that when all the colors are combined in proper proportions they produce *white*.

NOTE.—A very interesting and simple experiment will illustrate this. Cut out a circle of card-board, and paint the seven colors of the spectrum, red, orange, yellow, green, blue, indigo, and violet upon it, in their order, giving each color the same space proportionally that it occupies in the spectrum formed by the prism. Bore two small holes either side of the center; insert a string through these; twist the string into a spiral; and then, by alternately pulling and relaxing it, cause the card to revolve back and forth as a boy does his miniature circular saw. When the card is in rapid motion, the colors blend and the card appears nearly white [the imperfection of the several colors prevents absolute purity]; when it stops, the colors re-appear.

Several other experiments may be found in almost any good book on Physics or on Object Lessons which will serve to interest the class, and at the same time give valuable information.

Teach that *complementary* colors are any two colors which, combined, will produce white; thus, green and red, blue and orange, violet and yellowish green, violet and orange yellow are complementary colors; that is, the one *complements* or *fills out* what is lacking in the other to make white.

LESSON III.—Have this letter copied on slate or paper. It may be used as a guide for future lessons on letter-writing. By the time they are ready to leave the common school, the children should know how to express themselves naturally, clearly, and concisely in either a business or a friendly letter. Letter-writing in its perfection is a rare art attained by few, but children can not begin at too early an age to learn its rudiments, and few things that they learn in the school-room will prove of greater practical utility in their after lives. Teach them gradually how to date a letter properly, and why it should always be dated; where and how to write the various proper forms of introduction; to arrange the various topics about which they are to write in order, and to commence each new topic with a separate paragraph; where and how to write the various proper forms of conclusion and signature; how to fold a letter properly; how to insert it in the envelope properly; how to direct the envelope properly; where to place the stamp, and when to use more than one stamp.

A good exercise for the children is to change any of the lessons, or parts of them, into the form of a letter. Also, when a child asks for a particular favor, the teacher may grant it if the child will put his request in the form of a letter.

The abbreviation *o'clock*, for “of the clock,” should be explained.

LESSON IV.—Stories about the stars are almost as interesting to most children as fairy tales. A judicious selection of some of the most important of the simple truths of Astronomy should be made. If opportunity offers, teach the school which is the north star, and how to find it by means of the “pointers” in the “Great Dipper.”

See that this lesson is read *naturally*. The proper expression can be attained only by leading the children to apprehend the true meaning.

LESSON V.—Care must be taken with the pronunciation of *min'utes* (*mīn'īts*) and *New'found-land*. The *o* in the latter is of course silent. The word is often improperly accented and pronounced *New-fownd'land*.

This is an excellent lesson to be put in the form of a letter for composition drill.

LESSON VI.—In the script exercises in this lesson and elsewhere in the book, varied forms of the capital letters are presented simply that children may become familiar with them and recognize them, as they will have to do later in life in reading different styles of handwriting. To this same end children should be required to read each other's written exercises. Neither compel the pupils to follow the exact forms in the book, nor criticise them if they do. A legible, smooth, regular, and rapid handwriting is the point to be aimed at. Aside from the qualities mentioned, individual characteristics should not be interfered with. Individuality should be encouraged rather than condemned.

LESSON VII.—It is not presumed that every teacher of a district school is the possessor of a microscope. If, however, you are so fortunate as to own one, or can borrow one, this lesson can be made intensely interest-

ing and very instructive, and the object lessons can be extended to various familiar insects, plants, etc.

LESSON VIII.—Utilize this lesson by the introduction of a few striking and authentic stories illustrating the instinct of animals. Have the children write and hand in stories of their own. A selection of the best of these may be read aloud in the class.

LESSONS XII AND XIII.—In regard to these and similar lessons of a moral nature, it is well to bear in mind what is said by Mr. Sweet in his work on teaching: “One of the most effective ways of giving moral lessons is through the medium of well-selected stories. ‘A moral lesson,’ says Bain, ‘may be wrapped up in a tale and brought home with an impetus. Stories of great and noble deeds have fired more youthful hearts with enthusiasm than sermons have.’ ‘To hear about good men,’ says Richter, ‘is equivalent to living among them. For children there is absolutely no other morality than example, either seen or narrated.’ When you read a story or fable, let your pupils draw their own inferences and do their own moralizing. It is not best for you to spoil the effect by drawing conclusions.”

LESSON XXIV.—This lesson may be made the basis of object lessons on the varied occupations of the farmer, and on the different kinds of cloth, cotton, linen, etc.

LESSON XXV.—Teach how the clouds are formed. The rising mists of morning are familiar to almost every child who lives in the country.

LESSON XXIX.—See that *tī'ny* is properly pronounced as indicated by the diacritical marks. It is frequently mispronounced *tīn'y* or *tē'ny*.

LESSON XXXIII.—Be careful as to the pronunciation of *sewing*. There are two verbs, *sew* (*sū*), which have a very different meaning from *sew* (*sō*).

LESSON XXXVI.—*Against* should be pronounced *a-gěnst'* and not *a-gūnst'*.

LESSON XL.—Explain the abbreviation *ne'er*.

LESSON XLII.—See that pupils in writing this lesson do not use capitals in writing the words summer and autumn. Tell the children that this story is an allegory. Explain in simple language what an allegory is, and what this allegory teaches.

LESSON XLVII.—The word *landscape* will probably need careful explanation.

LESSON LVIII.—Explain what a dialogue is. See Webster's Dictionary. This lesson may be memorized and acted by two pupils.

LESSON LIX.—Explain when *did'st* takes the place of *did*, and see that its articulation is distinct.

LESSON LXIII.—Why are *Spring* and *Winter* spelled with capitals in this lesson? (Harvey's Revised English Grammar, Art. 240, 3).

MCGUFFEY'S THIRD READER.

In this book, lessons of the same instructive character as those in the Second Reader are continued, but the thought is usually deeper, keeping pace with the development of the child's mind.

It is not thought necessary to tabulate new words in a vocabulary beyond the middle of this book. By this time, the children should be able to pronounce at sight such new words as are introduced. In place of the vo-

cabularies, therefore, definitions of the most difficult words in each lesson are given, with diacritical marks to aid in pronunciation. These definitions are necessarily not exhaustive,—that definition only is given which is applicable to the word in connection with the context. The teacher should not confine the class to the words defined in the Reader, but should teach the class how to use the dictionary, and require pupils to consult it in studying their lessons whenever a word is encountered, the meaning of which is not perfectly clear.

As recommended in the Preface, there should be a daily drill on articulation, and exercises for this purpose are presented in the Introduction.

It is thought unnecessary to give detailed instructions as to particular lessons in this book. It will be seen that the lessons furnish abundant opportunities for practical composition work, which should be kept up till the end. How suggestive for composition, for example, is Lesson XXXI.

McGUFFEY'S FOURTH READER.

Sixteen pages of the introductory matter of this book are devoted to exercises in articulation and vocal culture. These exercises should not be “gone over” once and then dropped, but vocal culture should have a place in each day’s exercises. A critic, in writing of this point, says: “Nearly all teachers in our common schools teach reading, but the training is confined chiefly to the eye. Something is done in expression, but it is incidental, and few ever attempt any thing that looks to the development of the voice.” While it is not necessary

that a teacher himself should be a skilled elocutionist in order to attempt such development, yet he certainly should have correct ideas of the vocal organs and of the proper way to train them. Murdoch's Analytic Elocution, which contains the best method known for this purpose, ought to be studied by every teacher of reading who is deficient in a knowledge of the art of elocution. Work in the dark often does more harm than good, for good reading, like good singing, becomes an impossibility with a poorly trained voice. Particular attention is directed to what is said on page 250 in regard to making reading a healthful exercise.

Continue the plan recommended for the Third Reader in regard to dictionary work. In this connection, the study of synonyms should be introduced. Occasionally have the class write the reading lesson of the day, substituting synonyms for every word defined in the book, and for any others that may possibly be not fully understood. Again, in reading a lesson, have one pupil read a sentence, and require another to repeat the exact idea in his own words. Carefully correct all sentences so rendered, whether written or spoken, which are ungrammatical, tautological, or otherwise clumsy and ungraceful. This study of synonyms will prove very beneficial in extending the child's vocabulary, and in giving him a good command of language. It should be continued through all the advanced classes.

The questions at the close of the selections, under the head of "Exercises," are intended to be merely suggestive. The object aimed at is to be certain that the children fully grasp the ideas of the author, and also to enforce attention on the part of the class to what is being read, and thus to train the memory. A good

exercise in the same direction is to have the books closed after the lesson has been carefully read, and then have the pupils repeat the lesson in their own words, giving the substance of every paragraph as completely as possible. If time is too pressing to conduct this exercise orally, have each member of the class write the lesson from memory. It is not proposed to have the children memorize the exact *words* of the author, but to render the exact *ideas* of the lesson as completely as possible in their own language.

Short biographical sketches are given of nearly every author where his name first appears in the book. These sketches may be supplemented by the teacher to advantage whenever he happens to know any additional interesting facts in regard to the lives or writings of the authors.

Have the class bring in short selections of their own choosing from the writings of the most celebrated authors mentioned, and supplement the regular reading lesson from time to time by having these selections read aloud. In this way a taste for good literature may be cultivated early in life, and good seed may be sown in fertile soil, which, if neglected, will produce nothing but weeds.

The children in this Reader should be required to do certain work in connection with the reading lesson preparatory to studying the text-book on grammar. They may be taught here to classify words. Have them make lists of the names of objects, actions and qualities. Teach the use of pronouns as substitutes, and the correct position of words and phrases in sentences. Have the children observe words so closely as to be able to tell what they modify. Also, to classify sentences as to their use,

as declarative, interrogative, imperative, and exclamatory. This kind of work ought to be continued until the children are properly prepared to begin the formal study of grammar.

MCGUFFEY'S FIFTH AND SIXTH READERS.

In these two books, the character of the selections again undergoes a decided change. In the choice of matter composing them, two objects dominated: first, to present typical selections from the writings of as many of the foremost authors in the English language as possible; and second, to afford as much good material for elocutionary drill as possible within the limits of a school reader. The Sixth Reader is especially rich in selections adapted to elocutionary needs; it contains as good a selection as can possibly be made for this purpose, and, in fact, is used in many schools in place of a "Speaker." Both books contain ample instructions and exercises for vocal drill in their Introductions, which can be and should be used with good effect.

Biographical sketches of all the authors represented are given where the author's name first appears. Use these sketches simply as a basis or outline to be filled out in the composition work of the class.

The teacher should lead his pupils, not only to comprehend the thought of what he reads and to give it utterance in his own words, but also to observe and to criticize intelligently the form of expression. The words and phrases of the text, as well as the historical and biographical notes, should be studied with attention. The teacher himself should make a careful study of

every selection in the Fifth and Sixth Readers, and should make marginal notes in his private copies of the books for his own use, calling attention to figures of speech, well turned phrases, examples of forcible and beautiful language, etc., etc. This kind of work is essential if a teacher would make the reading lessons useful as specimens of the best English.

Benjamin Franklin, in his autobiography, tells how he materially improved his style of writing, and his example is well worthy of imitation. He used to read a portion of the "Spectator" carefully; then, laying it aside, he would try to write what he had read, as nearly as possible, in the words of the author. He would then compare his writing with the original, and note the differences of expression. After studying his errors carefully, he would again write the selection from memory, and again compare his production with the original, and so on, time after time, until he attained a satisfactory result. He pursued this plan until he formed a most excellent style of his own, modeled on that of the best writers of the English language. Probably no better way of improving one's style could be devised, and Franklin's plan would prove most useful in the school-room.

Be careful not to allow children to *copy* what they read. Make them write from memory, compare with the original, and rewrite. In these exercises, originality of expression is not to be condemned, but rather encouraged, provided the original expression is perfect in all respects. At the same time, awkwardness of expression, the wrong use of terms, redundancy, omission of words necessary to clearness or force, the improper transposition of words or phrases, etc., etc., may be

pointed out, and thus the children will rapidly learn to recognize what constitutes a good and what a bad style.

There is one danger about composition work and language exercises which should be carefully avoided: that is, in the attempt to impart elegance to language, all vigor and interest may be smoothed out of the writing. Vigor and interest are of vastly greater importance than even grammatical expression or spelling, and elegance should be made to take its proper place as a mere ornament. It is important only in the sense that the polish on a piece of rich furniture is important; and, as the quality of the wood is much more to be considered than the finish which is given it, so the thought displayed in a composition should receive more consideration than its outward form.

Matters of weighty import should not be lost sight of in attention to petty details. The proper place for the study of the latter is in the primary classes in composition work. In the higher classes they should call for no more thought on the part of a pupil than does the way he holds his pen.

Harvey's Grammar should be used as a book of reference to learn the correct use of figures of speech, and the dictionary should be constantly used to study the proper use and choice of words. Synonyms are, as a rule, by no means identical in meaning, and yet very frequently pupils are allowed to use indiscriminately, as though they were identical in meaning, such words as *recollect* and *remember*, *inference* and *conclusion*, *attachment* and *affection*, *attain* and *obtain*, *infectious* and *contagious*, etc., etc. The dictionary and the grammar should be used as books of reference in connection with the study

of the reading lessons more than is now the custom. The proper kind of study in this direction can not fail to impress upon pupils the value of a good grammar and a good dictionary, and the necessity of their careful study if accurate and elegant diction is ever to be acquired.

If supplementary reading be desired, you can go into no better field of literature than that of the authors here represented. Encourage the pupils to read as much as possible at home, giving them hints as to the best works of each author. There is no room for the study of English Literature, unfortunately, in the ordinary common school, but if the Fifth and Sixth Readers are studied and used as they should be, they will go very far towards taking the place of a regular text-book on that subject.

The Publishers realize that many schools and many homes are without the books of reference necessary to a proper understanding of some of the selections, should the text alone be given. In all cases, therefore, where it seemed there could be a possible want in this direction, notes have been added at the close of selections which give all the information necessary for intelligent reading.

SPELLING



VII.

McGUFFEY'S SPELLING-BOOK.

NOTE.—The teacher is referred to what has been said in regard to this subject on page 22.

WHILE the Spelling-book is thought to be useless in primary classes, it is on the other hand quite essential in the higher classes, even if the only object be to give pupils the thorough command of a simple practical vocabulary; for it is not to be presumed that any one set of Readers presents a complete list of the words which are used in every-day life, or that it presents a sufficient number of words of any particular class in such a way that they may be recognized easily as a class, and that the rule for spelling all words of that class may thus be deduced. This is the particular province and use of the Spelling-book.

Children below the Fourth Reader class are, as a rule, not old enough to understand the laws which govern Spelling, or to reason about the analogies of words; hence, work in spelling, up to this point, should be confined to the words included in the reading lessons and in the various written exercises. This work is of course general in its nature, and necessarily without plan, except that the simpler words are encountered in the reading lessons at an earlier period than those which are more difficult.

If the teacher has been careful to correct all errors,—that is, to accept nothing short of perfect spelling in all written work,—the children, by the time the Fourth Reader is reached, will have acquired a fair vocabulary of simple words, and will be prepared to begin the intelligent study of the Spelling-book.

The work now becomes specific in nature. Words are to be considered in certain well-defined classes, and carefully analyzed, compared, and contrasted. The general laws of spelling and pronunciation are thus best learned and remembered, while the peculiarities of unusual spellings and pronunciations are brought out and impressed upon the mind.

In teaching the Spelling-book, have every lesson *written* as well as spelled orally. By this plan, each member of the class is compelled to spell every word of the lesson; the diacritical marks are learned more thoroughly and more readily; and, finally, the children learn how to spell sooner and more accurately than they possibly can do should the work be confined to oral spelling alone.

If spelling exercises in addition to those in the book are given, the teacher should be careful not to burden the minds of the children with long lists of unusual and difficult words. Work of this description is time thrown away: first, because the chances are that the child will never have occasion in all his life to write these unusual words; and second, if he ever should have occasion to write them, after any considerable lapse of time, he probably will have entirely forgotten how to spell them. And, presuming that such words are remembered, what advantage are his spelling lessons to one who can spell *Phytelephas* or *Phthisipneumonia* readily, but constantly

writes *loose*, meaning *lose*, and makes no distinction between *dessert* and *desert*, or *bass* and *base*, or *relict* and *relic*, or *choir* and *quire*? The time of the spelling lesson should be devoted especially to those words which are liable to occur in ordinary composition, and not to useless puzzles in orthography; but words occurring in lessons in geography, and scientific terms in common use, should be spelled in connection with the recitations.

In the English language, difficulties in spelling arise chiefly from two causes: (1) the presence of silent letters, or letters whose sounds are not heard in the spoken word, and (2) the use of substitutes, several characters often representing the same sound, and the same character often representing different sounds. (See pages 61-65.) In order to accomplish effective work, words should be studied with especial reference to these two chief causes of difficulty. The Eclectic Spelling-book is particularly well adapted to the study of these points. All silent letters are cancelled by a light line, and the proper diacritical mark is given to every letter that demands one. In writing spelling lessons and dictation exercises, children should be required to cancel the silent letters, and to give each one that is sounded its proper diacritical mark, as indicated in the book.

Each accented syllable also should be marked. As elsewhere stated, pronunciation is even more important than spelling, since many more words are spoken than written. It is in this connection that oral spelling has its chief value, and the teacher should require that every word which is spelled orally should be pronounced properly and distinctly.

McGuffey's Eclectic Spelling-book, Revised Edition, may be divided to advantage into a three-years' course,

extending through the Fourth, Fifth, and Sixth Reader classes.

First Class.—If this plan be followed, the work of the First Class should include the first fifty-eight lessons. Begin with Lesson I, and drill on the sounds and diacritical marks. The identification of the simple elementary sounds with the characters that usually represent them is the first step to be accomplished, and should be mastered before even the slightest difficulties of spelling are presented. If pupils have been drilled properly on diacritical marks in the Readers, the first three lessons of the Speller will require no especial attention. In Lesson 4, substitutes and silent letters are first presented. Gradually new sounds, new marks, and new combinations of silent letters are introduced, and, by the time the children have finished Lesson 57, they will have been drilled upon all the distinctive diacritical marks used in Webster's Unabridged Dictionary.

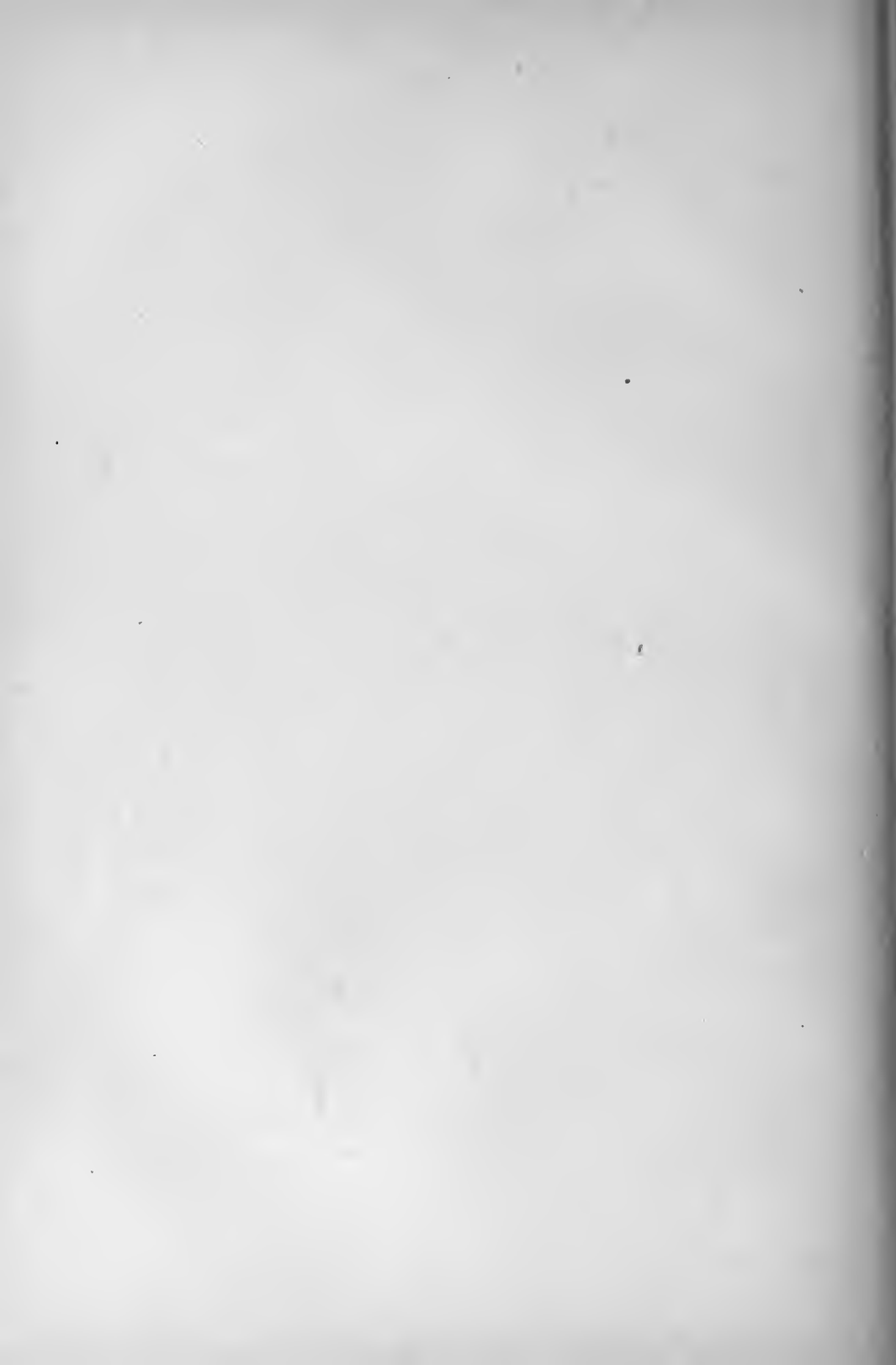
The remarks at the beginning of lessons are put there for a purpose, and should not be neglected. Usually they explain the particular point which the lesson immediately succeeding is intended to illustrate. Each lesson should be studied with reference to its accompanying remark, and in those instances where the remark sets forth a rule of spelling or pronunciation, the children should memorize and recite it,—as, for example, the remark at the beginning of Lesson 32.

Second Class.—The work of the second year should extend to Lesson 171. Especial attention is to be given this year to homophonous words, the proper accent of words of more than one syllable, and to suffixes and prefixes, but exercises on the diacritical marks and silent letters should not be abandoned.

Explain carefully what the word homophonous means, and in each lesson on homophonous words require the pupils first to spell and define the words orally, and then to write sentences, each of which shall include one or more words of the lesson. Brevity should not be encouraged at the expense of clearness. Each sentence should be of such a nature as to show that the pupil understands perfectly the meaning of the word used, and pupils should be made to rewrite every sentence that is ambiguous in this respect.

Third Class.—The work designed for the last year is devoted principally to pronunciation, but many lessons are interspersed on “Words which require care in Spelling.” The latter lessons contain, for the most part, words of every-day use, such as one may be called upon to spell at any time. A very few lists only are given of long and unusual words, and no words are presented as mere puzzles.

Lesson 201, on synonyms, is suggestive of other lessons of like character. The pupils should write sentences showing the fine distinctions between the various synonyms, and also when they are interchangeable and when not. Exercises of a similar nature have been suggested in connection with the reading lessons. These exercises, if properly conducted, will give pupils a fine command of language.



WRITING



VIII.

ECLECTIC SYSTEM OF PENMANSHIP.

WRITING is second in importance only to reading. It has been urged under the instructions for teaching reading that lessons in writing should go hand in hand with the former from the very beginning. Indeed, as Mr. Thompson well says in his preface to the *Hand-book to the Eclectic Penmanship*: "Neither writing nor spelling should be regarded as distinct branches of learning. They are only a necessary part of language teaching, and the method of teaching them should be adapted to the best methods of teaching reading and language in general."

Writing has for its object the expression of thought in written words, in order that this thought may be conveyed to the minds of others through the eye. Therefore, the first aim in writing should be *legibility*. No matter what other qualities writing may possess, if it is illegible it is useless. The next aim should be rapidity of execution. "Time is money," and if a man's business demands that much time be devoted to writing, rapidity is of but little less importance than legibility. Next, but a long way after these points, comes beauty. The first two may be considered the necessities, and the latter the luxury, of penmanship.

The Eclectic System of Penmanship is founded upon these principles. The style of the letters is severely plain and simple, and the method of instruction sug-

gested aims at legibility first, and then at rapidity and beauty. We can not give a better idea of what this method is than by quoting in full from the author's Preface to the new edition of the Hand-book:

"The New Eclectic Penmanship, and the accompanying Hand-book, are the result of a thorough revision and reconstruction of Thompson and Bowler's Eclectic System of Penmanship by L. S. Thompson.

"When the system was first published, in 1870, the present author had practiced for years the plan of giving whole letters and whole words as the first lessons in writing for little children, in opposition to the then prevailing method of first teaching lines as elements, then principles or parts of letters, then letters, and finally words.

"This word, thought, or language method of teaching writing to beginners has only lately found favor in the East, as an adjunct to the "Quincy Method," but it has been practiced in several western cities for the last twelve or fifteen years.

"The New Eclectic Penmanship claims superiority in its adaptation to the advanced methods of teaching other subjects.

"The writing or the spelling of columns of unmeaning words must always be distasteful. The writing and the spelling of words should be taught in sentences which embody a thought within the capacity of the child, at the very outset of the course.

"The analysis of letters is not the first step in learning to write, any more than an analysis of words is the first step in learning to talk. The first step is mere *imitation*. Analysis comes at a later period, and it should always be as simple and natural as possible.

“Capital letters should be introduced early in the course, because children need them in their daily exercises.”

For the benefit of those teachers who are not familiar with the Eclectic Penmanship, we here give a brief description of the several books of the regular course.

No. 1 is in large hand, and contains all the figures, all the small letters but two, and over one hundred words. Each letter is given once separately, but almost all the drill is required in simple words, the longer ones generally being built up from the shorter ones. A very simple explanation of each letter is suggested at the head of each page, but no rigid analysis is attempted in this book.

No. 2 introduces the capitals in classified order, and about ninety new words, some of them being quite short, and others longer. The long words are generally derived from the short ones by means of prefixes and affixes, thus giving a valuable drill in the derivation of words as well as in writing. The analysis is still general, as in **No. 1**.

No. 3 contains about forty-five connected phrases and short sentences. The capitals are classified according to difficulty in execution, and a closer analysis into the *elements* of the figures, small letters, and capitals, is indicated by the use of small figures.

No. 4 contains forty-six phrases and sentences, graded as to length. The size of the writing is a medium hand, or standard business size, the short letters being about one tenth of an inch, or two and a half millimeters in height. In this book, the head-lines are used only about one third of the distance down the page.

Nos. 5 and 6 are books of still longer sentences than those in No. 4. The capitals are still arranged in classified order. These two numbers are duplicated in smaller hand for girls for the accommodation of teachers who prefer for them copies in a smaller hand.

These six numbers are all that are *necessary* in order to teach a good, plain, and serviceable handwriting; but where time and circumstances allow, the higher numbers, 6½, 7, 8, and 9 should be used, especially if pupils are to be trained for mercantile life. The higher numbers are as follows:

No. 6½ contains twenty-four *double* line copies extending clear across the page. Merely writing short sentences and single lines once across the page can never produce a free, corresponding, business style. The copies in this book give short and concise rules for the use of punctuation marks in writing.

No. 7 is a book of commercial and other useful forms, and definitions of commercial terms. Copies 1, 2, 3, 6, 8, 10, and 18, define *Note*, *Maker*, *Endorser*, *Order*, *Receipt*, *Day-Book*, and *Draft*, respectively, while copies 4 and 5 are forms for notes; 7, an order for goods; 9, a receipt in full; 11, a day-book entry; 12 and 13, the face of a cash-book; 14, a ledger heading; 15, a due-bill; 16 and 17, an invitation and a reply; 19, a sight draft; 20, a poetical quotation; 21 and 24, prose quotations; 22 and 23, advertisements. No. 7 is not duplicated in smaller hand, for the reason that business writing should not be contracted below the standard size.

No. 8 is a book of words in medium hand, designed to exhibit a great variety of capitals. The Eclectic Penmanship is based on one simple business style of writing,

and this book is made only for the accommodation of those who prefer a variety of forms for capitals and small letters.

No. 9 is a book of bold, off-hand writing, and German Text, Old English, and Marking Letters.

The Exercise-book.—Besides the regular copy-books, each child should be supplied with an Exercise-book prepared to accompany this series. The Exercise-book is one of the most important of the series, and contains more than seventy different exercises for developing the various movements. Each class of exercises is explained in the Hand-book. It is adapted to all grades, and should be used daily in connection with the other books; for which purpose it is made larger than the others, and with a thick cover, so that the copy-book may be kept inside of it when not in use.

Writing Cards.—Every teacher should have a set of Writing Cards; and from these, so far as the *form* of letters is concerned, the lesson should be given. As each letter is analyzed and a full printed explanation given, any one can teach the forms of the letters from these charts as well as the boundaries of states from maps. The Writing Cards, seventy-two in number, contain but a single letter, figure, or exercise on each side, large enough to be seen across the largest school-room. The analysis is indicated by figures, and the explanations are printed in large type under each letter. They are indispensable to teachers who do not write well on the blackboard.

Pens, for school use, should have smooth, even points, fine enough to make the delicate hair-lines, and sufficiently elastic to make the shades even and clear. Teachers should keep a supply of pens, and not allow

pupils to write with large, coarse ones, designed only for writing on coarse paper. Most new pens, being more or less oily, should be wet and wiped dry before using, that the ink may flow more freely. None but the best pens should be put into the hands of pupils. The Eclectic Pen meets all requirements of the school-room.

Pen-holders should be light and plain, holding the pen firmly. About one third of a medium-sized pen should be inserted in the holder.

Good black ink is the best; it should be dark enough to enable the pupil to see the delicate hair-lines, and sufficiently fluid to flow freely. Common writing-fluid and cheap preparations are not fit for the school-room. When evaporation causes ink to thicken, it should be diluted with soft water or cold tea. The ink-wells should be covered when not in use, replenished every week, and often thoroughly cleaned.

In taking ink, the pupil should be careful not to allow the pen to touch the inkstand, dipping it only to the shoulder, and slowly removing it. If it is removed too quickly, the attraction of the fluid will leave too much ink on the pen; if too slowly, only a small quantity of ink will remain on the pen.

Pen-wipers.—Every pupil should be provided with a suitable pen-wiper; and after the pen is used, it should be wiped dry. One made of dark cloth will answer every purpose. A very cheap one can be made of black cloth cut in a circular form, and folded twice, making it a quarter circle of four leaves. By stitching four such pieces together at their right-angular points, a pretty and serviceable wiper will be formed, and the inside folds can be kept free from dirt, grease, etc. They may be kept with the other materials, as common prop-

erty to be distributed at each lesson, or the pupils may be allowed to have them at their desks.

Blotting-paper.—Every pupil should also be provided with a piece of thick blotting-paper, about three inches wide and six inches long. This may be used, not only for absorbing blots, but as a rest for the right hand, to prevent soiling the paper. It should be kept in the copy-book.

Habits of neatness should be required in wiping the pen and in taking care of materials, as well as in the care of the copy-book.

Classification.—In ungraded schools, the pupils should be classified in writing as well as in reading or arithmetic. To do this, at the commencement of the term the teacher may pass each pupil a slip of paper, and on it require him to write his name, the month, and day, and after this the slips may be collected and examined.

Place the best writers in the first division, and the poorest, and those who have never written, in the second division, never having more than two classes in the same room. Select such a book for each class as is best adapted to the largest number of pupils in it; and while giving out the books, pens, etc., and teaching position, pen-holding, and giving movement exercises, the two classes may be instructed together; but when the regular copy is taught, proceed with each class separately, so far as instruction is concerned.

After explaining the copy that the first class is to write, direct the pupils to practice it, and, while they are doing this, explain the copy for the second class and set them to practicing it. Then inspect the writing of the first class, illustrate the errors, and direct them

to practice again. Now give attention to the second class, and so on, keeping both classes at work together, that you may economize time, and that a part of the school may not be engaged in other affairs liable to jar the desks of those engaged in writing.

When and how Long to Write.—Any time may be taken for the writing lesson that suits the convenience of the teacher, except the first few minutes of the session, when the hand is unsteady from walking or play, and the last half hour in the day, when the pupils are apt to be too weary to pay attention, and the light may be inadequate.

The length of the lesson should usually be about half an hour daily; but, as the hand of the beginner soon tires, it is better to give young pupils shorter lessons, and have them more frequently, than to require them to practice when weary or in an incorrect position. With older pupils, who have formed the habits of sitting in a correct manner and of moving the pen freely and easily, the lesson may be continued an hour if desired.

Awakening an Interest.—The mere matter of imparting instruction is not the only work of the true teacher. He will awaken and keep up an interest; he will be full of enthusiasm in his work, infusing life and energy into the minds of his pupils; he will awaken and foster a spirit of emulation. This he can do in various ways, and if he is thoroughly alive to his work, he will not be content until he has learned some means of accomplishing it. But, to aid the inexperienced, we will give a few of the many ways that have proved successful:

At the commencement of the term, the pupils may be directed to write their names, with the year, month,

and day, or some motto, verse, or sentence on a slip of paper, which is to be filed away, and at the end of the term the same is to be written again, and compared with the first. These specimens, filed away term after term, serve as milestones to mark the progress of the pupils, and will be exhibited with pride by the successful teacher.

Another way is to have the class write several groups of letters, words, and sentences out of school, each one trying his best. Several of the finest specimens, with a number showing the greatest effort, may be selected and neatly pasted in a blank-book, with the pupil's name attached. These specimens may be ornamented with circles, squares, scrolls, or figures of different designs, made with a ruling pen, using inks of different colors. In one instance, where this plan was followed, every pupil whose name appeared in the book asked to carry it home to show to his parents, and this increased the interest and enthusiasm to such an extent that soon books were produced containing specimens from every pupil.

By another method, great freedom and rapidity, as well as accuracy, may be obtained. The teacher gives out some word or sentence, and directs the class to write it as many times as possible within a given time, and write it well. Careful attention to form, height, slant, width, spacing, and movement should be required, never allowing the writing to degenerate into scribbling. Soon the rules will become habits, requiring muscular rather than mental effort.

For full details as to the methods of conducting the writing lesson, a description of the letters and figures, and how to teach shading, spacing and form, the teacher

is referred to the "Hand-book to the New Eclectic Penmanship." It is important that every teacher who uses the copy-books should make a careful study of this Hand-book in order to accomplish the best results. Speaking of this point in his Introduction, Mr. Thompson says:

"That the results obtained in Penmanship, in most of our public schools, are not what they should be, is evident from an inspection of the examination papers of most of the graduating classes, and from the oft-repeated remark of merchants, that, when boys come from the public schools to the counting-room, their handwriting is impracticable, and soon undergoes an entire change.

"The fault lies in the bad arrangement and adaptation of books, in the incorrect methods of teaching which they inculcate, and in the fact that many of the best teachers in our common schools have had no opportunity to fit themselves properly for teaching Penmanship.

"There is, therefore, a demand for something better, and it is believed that there will be great improvement in the results obtained if the plan of the Eclectic Series is carried out as directed in the Copy-books, and in this little Hand-book, which has been prepared to aid those who wish to qualify themselves to teach this branch most advantageously.

"The best penman may be a very poor teacher; and, on the other hand, the most successful teacher may be a very ordinary writer; and, as 'a lame man may be able to point out the way, though unable to walk therein,' so it is believed that any one who has sufficient ability to teach other branches successfully, can teach writing well by becoming thoroughly acquainted with its principles, and insisting on a strict adherence to them."

ARITHMETIC



IX.

ARITHMETIC.—FIRST YEAR.

THE subject of Arithmetic is usually considered easy to teach, probably because it seems to possess a more definite aim than most of the common branches. But, nevertheless, it is a subject in regard to which the young teacher is liable to make serious errors of judgment, both as to the method adopted and the manner of conducting recitations under that method.

It has become somewhat the fashion to adopt new and fanciful ideas in teaching, and many young teachers are misled into thinking that unless a method is new it can not be the best. It should be borne in mind, however, that *change* is not necessarily *progress*. Any and every method must be subjected, first, to the laws of common sense as applied to the development of a child's mind; and, second, to the test of actual experience in the class-room, before it can be proclaimed the best, or even a good, method.

The method presented in this Manual is neither purely nor partly theoretical in nature, but is the method of practical, successful teachers of long experience. It has stood the test of the school-room for years, and has witnessed the growth and failure of many other methods, some of which attained a wide but short-lived popularity, while others are at work to-day, befogging the minds of little children, or converting them into mere

figure-making machines, and in either case creating a life-long distaste for mathematics.

It is difficult, not to say impossible, to lay down an arbitrary rule as to how much work shall be attempted in any one year in ungraded schools, since the conditions,—such as the length of the school year, the amount of time that can be devoted to arithmetic, the number, intelligence, and age of the class, etc.,—differ so widely in the numerous schools. The divisions of work recommended in this Manual are not to be considered as arbitrary, therefore, but only as meeting the average requirements of common schools. They are to be used simply as a guide, and should be modified at the discretion of the teacher as circumstances may demand.

The first step should be to examine the entire school carefully, and find out, if possible, just how thorough the instruction of the more advanced pupils has been. Then classify the pupils according to their knowledge of the subject, entirely irrespective of age or of the inequality of numbers in each class.

The work that is here presented under the heads “First Year” and “Second Year” should be thoroughly mastered, whether it requires one year, two years, or three years. If the entire school be sufficiently advanced, the instruction here suggested for the primary classes may be omitted altogether, but the teacher should be thoroughly satisfied on this point before assigning pupils to higher classes.

Older pupils, whom it may be necessary to place in the primary classes at first, will naturally be able to advance more rapidly than the younger ones, and should be transferred to higher classes as they show

themselves capable of such advancement. By having such pupils recite in both a higher and a lower class for a time, these transfers need not disturb in the least the daily routine of the programme.

In the first class, besides those who have never studied Arithmetic, put all who have been poorly trained in the elementary processes. It will be economy of time and labor to do this, even if you have to include the entire school in this division for a time; for, in arithmetic, above all other studies of the common school course, it is of the utmost importance that one step shall be thoroughly understood before the next is attempted. The first two years' training is of more importance than all the rest the child receives.

Do not attempt to have the children use a book in the primary class.—A book should not be used, because no book contains, and no book can be made to contain, the kind of instruction necessary the first year.

Do not teach the figures in the first lessons, and do not allow the children to do any written work; but teach orally, illustrating every operation, at first, by means of various objects.—The instruction should be entirely oral, and should deal altogether at first with concrete numbers. The little child can not grasp abstract ideas. It is true you can teach him to repeat, “2 and 2 are 4;” “2 from 4 leave 2;” “2 times 2 are 4;” and “4 divided by 2 equal 2.” But, without the proper preliminary work, these words can not possibly convey any clear meaning to his mind. This kind of instruction in a primary class is simply machine drilling on abstract numbers and words which convey no ideas, or at best a mere jumble of ideas to the child's mind. It is one of the worst, and at the same time one of the most common, faults

in the teaching of arithmetic, and it is one which is very apt to disgust pupils with the subject from the outset. On the other hand, if the proper method of teaching is pursued, which may properly be called the object method, the children are taught to think; they will be interested at the very beginning, and they will be kept interested by this method until they are successfully carried to the point where the object method is no longer necessary, and their minds are ready to grasp the abstract, through careful preliminary drill on the concrete.

Begin the teaching of arithmetic, then, with *objects*,—blocks, balls, marbles, sticks, books, kernels of corn, apples, shells, pebbles, etc., etc. The more varied your assortment of objects the better. The numeral frame and other mechanical devices are useful, but should not be used exclusively, or the work will become monotonous and tiresome.

Teach the concrete digital numbers in regular order, from one to ten inclusive, illustrating each number by corresponding groups of objects.—The first step is to teach numbering; that is, so to train the child that he can instantly give the number of any group of objects not exceeding ten, at sight, and *without counting*. Experience has proved that nearly every child old enough to commence school has at that time a very good knowledge of the numbers 1 and 2. It is therefore unnecessary to spend much time on these numbers. However, the class should be thoroughly tested on them before proceeding to take up the number three. The average child commencing school is unable to recognize at sight, without counting, the number of a group of objects exceeding three, and from this point the successive steps towards

ten must be made slowly and carefully. Do not take up a new number until the class has proved itself perfectly trained on all that precedes. Each day's work should include a review of all the previous work, so as to keep the different numbers fresh in the mind.

Do not allow a child to count by ones to find how many objects there are in a group, but teach him to recognize the group as a whole.—Teach what *three* means by repeatedly combining two and one, and one and two, into groups of three apples, three blocks, three marbles, three books, three pencils, three lines, three dots, etc., etc., and then immediately separating these groups again into their component parts, two and one, or one and two, apples, blocks, etc. When the group three instantly suggests the idea three to the entire class, teach *four* in the same manner by combining and separating one and three, three and one, and two and two objects. Make all the possible combinations and separations of integers forming each number, using as wide a variety of objects as possible. As soon as the class is sufficiently advanced, have the children do the combining and separating of objects for themselves.

If you begin by teaching a child to count, he is very apt to get an erroneous idea by considering the group of objects individually instead of collectively; and, as he points them out,—either actually or mentally,—“one, two, three, four, five,” his *three* means *the third object* enumerated, and his *five* means *the fifth*; so that *five*, to his mind, really means one particular object—the fifth—in place of a group of five objects, irrespective of order or individuality. Not until the child has learned to associate a number with its group, should he be taught to count the objects in that group. If the child

once forms the habit of counting by ones in order to answer such a question as, "How many blocks in this group?" it will be almost impossible to correct his error. In place of adding figures at sight, when that step of the work is reached, he will stop to count on his fingers to obtain the result, and will probably never be able to add rapidly and at the same time accurately. Therefore, we would suggest that counting be deferred altogether until the class can satisfactorily number any group including ten or less. When you do teach the class to count, have a group of objects counted forward and backward, and in promiscuous order. In this way, you will avoid the danger of having the number associated with one particular object.

Teach Addition and Subtraction together.—The one is the reverse of the other, and when taught together they help the child to understand each process more readily than if they were taught separately. It is not necessary to teach the signs until abstract numbers and written work are commenced.

Do not teach Multiplication and Division in the primary class.—They do not help in the understanding of addition and subtraction; but, on the contrary, are apt to confuse the child by the number of different processes presented to his mind at once.

Teach the concrete digital numbers without objects.—When, by the use of objects before the eyes of the class, you have taught all satisfactorily to number groups at sight, and to add and subtract all the possible combinations within the limit of ten as a total, the children are ready to take the next step. From combining and separating objects they can see, lead them to combine and separate groups of objects that they can not see,

but can readily imagine, such as animals, houses, trees, tools, toys, or any objects with which they are familiar. Repeat the same processes that were used with the objects before the class in combining and separating, and in the same order. Give numerous exercises on each number, with constant reviews, until the entire class can perform each operation with great accuracy and rapidity.

Teach the abstract digital numbers orally.—When you are satisfied with the results of the work thus far, take the next step by simply dropping the names of the objects, and teach the *abstract* digital numbers orally in the same order that you taught the concrete. Accuracy and rapidity are the important aims, and the children should be drilled until they can give the answers to all the possible combinations and separations instantly, and apparently without stopping to think.

Teach the digital figures, and the use of the signs plus and minus and the sign of equality.—During the last part of the first year, when the children are thoroughly proficient in the preceding steps, teach them the written characters that stand for the numbers which they have learned to use orally. Write the corresponding words and figures on the board in two columns, as in the margin, and explain that we use figures in arithmetic in place of words for the sake of convenience and rapidity. Exercise the class in making the several figures on their slates and on the board, at first separately, and then in simple problems involving both concrete and abstract numbers.

<i>One,</i>	1
<i>Two,</i>	2
<i>Three,</i>	3
<i>Four,</i>	4
<i>Five,</i>	5
<i>Six,</i>	6
<i>Seven,</i>	7
<i>Eight,</i>	8
<i>Nine,</i>	9
<i>Ten,</i>	10

To teach the signs, write on the board an example similar to the following:

$$\begin{aligned} 4 \text{ and } 2 \text{ are } 6. \\ 4 \text{ plus } 2 \text{ equal } 6. \\ 4 + 2 = 6. \end{aligned}$$

Explain that in place of the word *plus*, the sign $+$ is commonly used, and that it is to be read *plus*; thus, $4 + 2$ is read "4 plus 2." In the same way explain that the sign $=$, called the sign of *equality*, stands in place of the words "is equal to," or *equals*; thus, $4 + 2 = 6$, is read: "4 plus 2 equals 6." Teach that the sign $-$, called the *minus* sign, is used in place of the word *less* or *minus*, thus:

$$\begin{aligned} 6 - 5 = 1, \text{ is read } \\ 6 \text{ less } 5 \text{ equals } 1, \text{ or } \\ 6 \text{ minus } 5 \text{ equals } 1. \end{aligned}$$

Have the class practice with the signs until they are used as readily in reciting as the words for which they stand.

The following table will be found useful for slate and board exercises. Have the class fill out the blanks. It may also be used for oral drill, and at the close of the year children should be able to give the answers *instantly*.

$$1 + 1 = \quad ; \quad \text{therefore, } 2 - 1 =$$

$$2 + 1 \text{ or } 1 + 2 = \quad ; \quad \text{therefore, } 3 - 1 = \quad ; \quad 3 - 2 =$$

$$\begin{aligned} 3 + 1 \text{ or } 1 + 3 = \quad ; \quad \text{therefore, } 4 - 1 = \quad ; \quad 4 - 3 = \\ 2 + 2 = \quad ; \quad \text{therefore, } 4 - 2 = \end{aligned}$$

$$4 + 1 \text{ or } 1 + 4 = ; \quad \text{therefore, } 5 - 1 = ; \quad 5 - 4 =$$

$$3 + 2 \text{ or } 2 + 3 = ; \quad \text{therefore, } 5 - 2 = ; \quad 5 - 3 =$$

$$5 + 1 \text{ or } 1 + 5 = ; \quad \text{therefore, } 6 - 1 = ; \quad 6 - 5 =$$

$$4 + 2 \text{ or } 2 + 4 = ; \quad \text{therefore, } 6 - 2 = ; \quad 6 - 4 =$$

$$3 + 3 = ; \quad \text{therefore, } 6 - 3 =$$

$$6 + 1 \text{ or } 1 + 6 = ; \quad \text{therefore, } 7 - 1 = ; \quad 7 - 6 =$$

$$5 + 2 \text{ or } 2 + 5 = ; \quad \text{therefore, } 7 - 2 = ; \quad 7 - 5 =$$

$$4 + 3 \text{ or } 3 + 4 = ; \quad \text{therefore, } 7 - 3 = ; \quad 7 - 4 =$$

$$7 + 1 \text{ or } 1 + 7 = ; \quad \text{therefore, } 8 - 1 = ; \quad 8 - 7 =$$

$$6 + 2 \text{ or } 2 + 6 = ; \quad \text{therefore, } 8 - 2 = ; \quad 8 - 6 =$$

$$5 + 3 \text{ or } 3 + 5 = ; \quad \text{therefore, } 8 - 3 = ; \quad 8 - 5 =$$

$$4 + 4 = ; \quad \text{therefore, } 8 - 4 =$$

$$8 + 1 \text{ or } 1 + 8 = ; \quad \text{therefore, } 9 - 1 = ; \quad 9 - 8 =$$

$$7 + 2 \text{ or } 2 + 7 = ; \quad \text{therefore, } 9 - 2 = ; \quad 9 - 7 =$$

$$6 + 3 \text{ or } 3 + 6 = ; \quad \text{therefore, } 9 - 3 = ; \quad 9 - 6 =$$

$$5 + 4 \text{ or } 4 + 5 = ; \quad \text{therefore, } 9 - 4 = ; \quad 9 - 5 =$$

$$9 + 1 \text{ or } 1 + 9 = ; \quad \text{therefore, } 10 - 1 = ; \quad 10 - 9 =$$

$$8 + 2 \text{ or } 2 + 8 = ; \quad \text{therefore, } 10 - 2 = ; \quad 10 - 8 =$$

$$7 + 3 \text{ or } 3 + 7 = ; \quad \text{therefore, } 10 - 3 = ; \quad 10 - 7 =$$

$$6 + 4 \text{ or } 4 + 6 = ; \quad \text{therefore, } 10 - 4 = ; \quad 10 - 6 =$$

$$5 + 5 = ; \quad \text{therefore, } 10 - 5 =$$

This is the extent of the work that should be attempted in the primary class; and if the instruction is as thorough, and the reviews are as frequent as they should be, this amount of work will occupy the full year. It is granted that much greater *apparent* advance can be made in this time, and that children can be taught the names of numbers as high as a hundred or

more, and to write the figures representing them; but the learning of names and the making of figures do not of themselves imply the gaining or developing of ideas, and classes forced too rapidly over the preliminary ground without thoroughly understanding each step as they advance, will sooner or later show the bad effects of this method of teaching.

X.

ARITHMETIC.—SECOND YEAR.

THE class should now be prepared to commence the study of Ray's New Primary Arithmetic. If the teacher prefers to do so, the first six lessons on numeration and notation may be omitted until the close of Lesson XXXVII.

Lessons VII, VIII, and IX are a review of the first year's work, and the advance work begins with Lesson XI. Teach each number from 11 to 20 inclusive, just as you taught the numbers from 1 to 10, using the tables and examples in the book as supplementary to the oral drill.

If the first year's work has been thoroughly done, the advance from 10 to 20 will be comparatively easy and rapid. But the work should still be exhaustive, and should include counting by ones, twos, threes, etc., forward and backward; also, all the possible combinations and separations with a total of 20 or less.

Lesson XI introduces the new number, 11. To teach 11, take a group of ten objects, such as pencils, blocks, sticks, or cards, and tie them in a bunch for convenience of handling. Before doing this, however, be sure that the entire class recognizes the fact that there are ten objects in the group or bunch. Then, holding up the bunch, ask: "How many sticks are in this group?" Holding up one stick, ask: "How many sticks do I now hold up?" Holding up one bunch and

one stick, ask: "How many sticks are ten sticks and one stick? Now, if I take away one stick (illustrating), how many sticks are left?"

Continue the illustration of this number with various objects, and by means of dots, lines, crosses, etc., on the blackboard, until the children are familiar with eleven as composed of *one* (group of) *ten* and *one unit*.

Teach the class the characters that stand for eleven, writing both the word and the figures on the board, thus: *Eleven*, 11. The class are now prepared to take up Lesson XI in the book.

Preface each of the succeeding lessons by similar oral work, illustrating 12, 13, 14, etc., up to 20, as these numbers are introduced, constantly reviewing with each lesson the numbers already learned.

If the class have not already been taught the reading and writing of numbers up to 100, Lessons II to VI inclusive should here be introduced, and the drill continued until the class are perfect.

The different values attached to a figure by its position in the order of tens or in the order of units, may be illustrated in the following manner, so as to be easily understood and remembered:

Hold up one bunch of ten objects, and ask: "How many objects in this group?" When the question is answered, write the number 10 on the blackboard.

Hold up one bunch and one object, and ask: "How many (sticks) do I now hold up?" When the answer *eleven* is given, reply "Yes, and eleven is made up of 1 ten and 1," holding up the bunch and the single object. "Now I will write the figures that stand for *one* ten and *one*," writing the number 11 on the board under the number 10, as you say "*one* ten and *one*." Continue in

this way with the consecutive numbers up to 20, illustrating with objects, and writing the corresponding figures in the column on the board. Then show the children, again illustrating each number with objects, that, in the combination 10, the 1 stands for 1 (group of) *ten*, and the 0, which means nothing, or naught, stands for no *ones* or *units*. That in the combination 11 the first 1 stands for 1 (group of) *ten*, and the second 1 stands for *one* unit. That 12 stands for 1 ten and 2 units, etc. Finally, that 20 stands for 2 tens and no units.

There will be no difficulty in illustrating 21, 22, 23, etc., 31, 32, 33, etc., in the same manner, by means of the tied bunches of ten, up to ten tens, or 100. The children should then understand clearly, without a formal statement, that the figure in the second order from the right tells how many *tens*, and the figure in the first order how many *ones*, there are in a number.

The following tables can be used to advantage as review exercises, both in oral and written work, having the children fill the blanks:

10 + 1 or 1 + 10 = ;	therefore, 11 - 1 = ;	11 - 10 =
9 + 2 or 2 + 9 = ;	" 11 - 2 = ;	11 - 9 =
8 + 3 or 3 + 8 = ;	" 11 - 3 = ;	11 - 8 =
7 + 4 or 4 + 7 = ;	" 11 - 4 = ;	11 - 7 =
6 + 5 or 5 + 6 = ;	" 11 - 5 = ;	11 - 6 =

11 + 1 or 1 + 11 = ;	therefore, 12 - 1 = ;	12 - 11 =
10 + 2 or 2 + 10 = ;	" 12 - 2 = ;	12 - 10 =
9 + 3 or 3 + 9 = ;	" 12 - 3 = ;	12 - 9 =
8 + 4 or 4 + 8 = ;	" 12 - 4 = ;	12 - 8 =
7 + 5 or 5 + 7 = ;	" 12 - 5 = ;	12 - 7 =
6 + 6 = ;	" 12 - 6 =	

$12 + 1$ or $1 + 12 =$;	therefore, $13 - 1 =$;	$13 - 12 =$
$11 + 2$ or $2 + 11 =$;	“ $13 - 2 =$;	$13 - 11 =$
$10 + 3$ or $3 + 10 =$;	“ $13 - 3 =$;	$13 - 10 =$
$9 + 4$ or $4 + 9 =$;	“ $13 - 4 =$;	$13 - 9 =$
$8 + 5$ or $5 + 8 =$;	“ $13 - 5 =$;	$13 - 8 =$
$7 + 6$ or $6 + 7 =$;	“ $13 - 6 =$;	$13 - 7 =$

$13 + 1$ or $1 + 13 =$;	therefore, $14 - 1 =$;	$14 - 13 =$
$12 + 2$ or $2 + 12 =$;	“ $14 - 2 =$;	$14 - 12 =$
$11 + 3$ or $3 + 11 =$;	“ $14 - 3 =$;	$14 - 11 =$
$10 + 4$ or $4 + 10 =$;	“ $14 - 4 =$;	$14 - 10 =$
$9 + 5$ or $5 + 9 =$;	“ $14 - 5 =$;	$14 - 9 =$
$8 + 6$ or $6 + 8 =$;	“ $14 - 6 =$;	$14 - 8 =$
$7 + 7 =$;	“ $14 - 7 =$	

$14 + 1$ or $1 + 14 =$;	therefore, $15 - 1 =$;	$15 - 14 =$
$13 + 2$ or $2 + 13 =$;	“ $15 - 2 =$;	$15 - 13 =$
$12 + 3$ or $3 + 12 =$;	“ $15 - 3 =$;	$15 - 12 =$
$11 + 4$ or $4 + 11 =$;	“ $15 - 4 =$;	$15 - 11 =$
$10 + 5$ or $5 + 10 =$;	“ $15 - 5 =$;	$15 - 10 =$
$9 + 6$ or $6 + 9 =$;	“ $15 - 6 =$;	$15 - 9 =$
$8 + 7$ or $7 + 8 =$;	“ $15 - 7 =$;	$15 - 8 =$

$15 + 1$ or $1 + 15 =$;	therefore, $16 - 1 =$;	$16 - 15 =$
$14 + 2$ or $2 + 14 =$;	“ $16 - 2 =$;	$16 - 14 =$
$13 + 3$ or $3 + 13 =$;	“ $16 - 3 =$;	$16 - 13 =$
$12 + 4$ or $4 + 12 =$;	“ $16 - 4 =$;	$16 - 12 =$
$11 + 5$ or $5 + 11 =$;	“ $16 - 5 =$;	$16 - 11 =$
$10 + 6$ or $6 + 10 =$;	“ $16 - 6 =$;	$16 - 10 =$
$9 + 7$ or $7 + 9 =$;	“ $16 - 7 =$;	$16 - 9 =$
$8 + 8 =$;	“ $16 - 8 =$	

$16 + 1$ or $1 + 16 =$;	therefore, $17 - 1 =$;	$17 - 16 =$
$15 + 2$ or $2 + 15 =$;	“ $17 - 2 =$;	$17 - 15 =$
$14 + 3$ or $3 + 14 =$;	“ $17 - 3 =$;	$17 - 14 =$
$13 + 4$ or $4 + 13 =$;	“ $17 - 4 =$;	$17 - 13 =$
$12 + 5$ or $5 + 12 =$;	“ $17 - 5 =$;	$17 - 12 =$

$$\begin{array}{lll}
 11 + 6 \text{ or } 6 + 11 = ; & \text{therefore, } 17 - 6 = ; & 17 - 11 = \\
 10 + 7 \text{ or } 7 + 10 = ; & \text{" } 17 - 7 = ; & 17 - 10 = \\
 9 + 8 \text{ or } 8 + 9 = ; & \text{" } 17 - 8 = ; & 17 - 9 =
 \end{array}$$

$$\begin{array}{lll}
 17 + 1 \text{ or } 1 + 17 = ; & \text{therefore, } 18 - 1 = ; & 18 - 17 = \\
 16 + 2 \text{ or } 2 + 16 = ; & \text{" } 18 - 2 = ; & 18 - 16 = \\
 15 + 3 \text{ or } 3 + 15 = ; & \text{" } 18 - 3 = ; & 18 - 15 = \\
 14 + 4 \text{ or } 4 + 14 = ; & \text{" } 18 - 4 = ; & 18 - 14 = \\
 13 + 5 \text{ or } 5 + 13 = ; & \text{" } 18 - 5 = ; & 18 - 13 = \\
 12 + 6 \text{ or } 6 + 12 = ; & \text{" } 18 - 6 = ; & 18 - 12 = \\
 11 + 7 \text{ or } 7 + 11 = ; & \text{" } 18 - 7 = ; & 18 - 11 = \\
 10 + 8 \text{ or } 8 + 10 = ; & \text{" } 18 - 8 = ; & 18 - 10 = \\
 9 + 9 = ; & \text{" } 18 - 9 =
 \end{array}$$

$$\begin{array}{lll}
 18 + 1 \text{ or } 1 + 18 = ; & \text{therefore, } 19 - 1 = ; & 19 - 18 = \\
 17 + 2 \text{ or } 2 + 17 = ; & \text{" } 19 - 2 = ; & 19 - 17 = \\
 16 + 3 \text{ or } 3 + 16 = ; & \text{" } 19 - 3 = ; & 19 - 16 = \\
 15 + 4 \text{ or } 4 + 15 = ; & \text{" } 19 - 4 = ; & 19 - 15 = \\
 14 + 5 \text{ or } 5 + 14 = ; & \text{" } 19 - 5 = ; & 19 - 14 = \\
 13 + 6 \text{ or } 6 + 13 = ; & \text{" } 19 - 6 = ; & 19 - 13 = \\
 12 + 7 \text{ or } 7 + 12 = ; & \text{" } 19 - 7 = ; & 19 - 12 = \\
 11 + 8 \text{ or } 8 + 11 = ; & \text{" } 19 - 8 = ; & 19 - 11 = \\
 10 + 9 \text{ or } 9 + 10 = ; & \text{" } 19 - 9 = ; & 19 - 10 =
 \end{array}$$

$$\begin{array}{lll}
 19 + 1 \text{ or } 1 + 19 = ; & \text{therefore, } 20 - 1 = ; & 20 - 19 = \\
 18 + 2 \text{ or } 2 + 18 = ; & \text{" } 20 - 2 = ; & 20 - 18 = \\
 17 + 3 \text{ or } 3 + 17 = ; & \text{" } 20 - 3 = ; & 20 - 17 = \\
 16 + 4 \text{ or } 4 + 16 = ; & \text{" } 20 - 4 = ; & 20 - 16 = \\
 15 + 5 \text{ or } 5 + 15 = ; & \text{" } 20 - 5 = ; & 20 - 15 = \\
 14 + 6 \text{ or } 6 + 14 = ; & \text{" } 20 - 6 = ; & 20 - 14 = \\
 13 + 7 \text{ or } 7 + 13 = ; & \text{" } 20 - 7 = ; & 20 - 13 = \\
 12 + 8 \text{ or } 8 + 12 = ; & \text{" } 20 - 8 = ; & 20 - 12 = \\
 11 + 9 \text{ or } 9 + 11 = ; & \text{" } 20 - 9 = ; & 20 - 11 = \\
 10 + 10 = & \text{" } 20 - 10 =
 \end{array}$$

Do not attempt to teach the combinations and separations in this complete way beyond the total of 20 at

Similar tables for each ten numbers, 21 to 29, 31 to 39, etc., up to 91 to 99, should be written on the board, and the class should be drilled on them until all can give the results instantly *without counting*.

Drill the class also in adding columns of digital numbers whose totals shall be 100 or less; and teach the pupils to write the totals at the foot of the column properly, with the *unit* figure of the sum directly under the column added.

Commence with a few numbers at a time, and extend the columns to greater and greater length as the class advances in proficiency.

In adding a column,—for example, the one in the margin,—do not allow a child to say, “6 and 8 are 14; 14 and 4 are 18; 18 and 1 are 19,” etc.; but teach him to speak the *results* of his mental additions only, thus: “6, 14, 18, 19, 28, 35, 40, 42, 45.”

Drill on similar examples until the class can add long columns rapidly and accurately. Have the columns added both from bottom to top and from top to bottom. By changing the top and bottom figures only, an entirely new set of combinations are formed, whichever way the column may be added. In this way, the teacher can present a very large number of blackboard exercises for the class with a comparatively small expenditure of time and labor on his own part.

In the business world, the accountant is called upon to use addition more frequently, as a rule, than all the other fundamental processes combined. It is therefore of the utmost importance that proficiency in this respect should be strictly demanded, and practice in

the addition of columns of figures should commence as soon as the child is able to combine numbers. If the drill on the primary combinations in addition has been thorough, the children should be able, in a very short time, to add long columns accurately as fast or faster than they can utter the consecutive additions aloud. The only way to learn to add accurately and rapidly is through much practice; therefore, it is necessary to continue this class of exercises for some time, and even after taking up other steps.

The only difficulty in teaching the subtraction of digits from the numbers between 10 and 100 will be found in cases where the digital number exceeds the figure in the unit's place of the minuend. This difficulty can be readily overcome by continual practice on such subtractions. Teach the children in such cases to *add ten to the units* of the minuend before subtracting the digit number, and to *subtract one from the tens* of the minuend to obtain the tens of the answer. To familiarize this rule, give a long series of exercises, retaining first the same units' figure, and then the same tens' figure, of the minuend throughout, while varying the tens in the first case and the units in the second, and using as a subtrahend the digital numbers in succession. The following examples will serve as a guide for this work:

$\begin{array}{r} 21 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 31 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 41 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 51 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 61 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 71 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 81 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 91 \\ 2 \\ \hline \end{array}$
$\begin{array}{r} 22 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 42 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 52 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 62 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 72 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 82 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 92 \\ 3 \\ \hline \end{array}$

Etc., etc., etc.

$\begin{array}{r} 21 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ 4 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ 5 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 26 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 28 \\ 9 \\ \hline \end{array}$
$\begin{array}{r} 31 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 33 \\ 4 \\ \hline \end{array}$	$\begin{array}{r} 34 \\ 5 \\ \hline \end{array}$	$\begin{array}{r} 35 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 37 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 38 \\ 9 \\ \hline \end{array}$

Etc., etc., etc.

Tables similar to the following, embracing 30 to 38, 40 to 48, etc., up to 90 to 98, should be written on the board and used as a drill exercise in subtracting. These tables may be learned in regular order, but promiscuous exercises on them should also be given.

$\begin{array}{r} 20 \\ 1 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 4 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 5 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 9 \\ \hline \end{array}$
	$\begin{array}{r} 21 \\ 2 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 4 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 5 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 9 \\ \hline \end{array}$
		$\begin{array}{r} 22 \\ 3 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 4 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 5 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 9 \\ \hline \end{array}$
			$\begin{array}{r} 23 \\ 4 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ 5 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ 9 \\ \hline \end{array}$
				$\begin{array}{r} 24 \\ 5 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ 9 \\ \hline \end{array}$
					$\begin{array}{r} 25 \\ 6 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ 9 \\ \hline \end{array}$
						$\begin{array}{r} 26 \\ 7 \\ \hline \end{array}$	$\begin{array}{r} 26 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 26 \\ 9 \\ \hline \end{array}$
							$\begin{array}{r} 27 \\ 8 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ 9 \\ \hline \end{array}$
								$\begin{array}{r} 28 \\ 9 \\ \hline \end{array}$

Drill also on adding and subtracting by tens to and from each number within the limits of 10 and 100.

Up to this point, the children have been taught to consider numbers as *parts* to be combined and separated. They are now to study the same numbers in their relations as *factors*. In introducing these new processes of multiplication and division, the principle of developing ideas before words should control, and the knowledge already gained should be used as a stepping-stone to the acquisition of the new ideas. For example, the child already knows that $2 + 2 + 2 = 6$; also, that $3 + 3 = 6$. With this knowledge as a basis, it is very easy to show him that three times 2 are 6, and that two times 3 are 6. Thus, the child's knowledge of addition is used in teaching him multiplication. This seems much more rational than at once plunging into the multiplication table, and, by dint of incessant repetition, memorizing the combinations of a host of factors and products. By the first method, the child learns *how* the product is formed, and *why* 3×2 or $2 \times 3 = 6$. By the second method, he simply remembers—if he can remember—the formula.

It is not to be disputed that the multiplication table should be memorized, so that any two digital factors being given, the product shall be given *instantly* and without adding; but this mastery of the table should be a gradual process, and each successive product should be properly analyzed and introduced. If this plan of teaching be adopted, it will be found that the children understand what they are studying, that they learn more rapidly, and that they remember the tables better after they are learned.

We submit the following method of treating Lesson

XXXIX, and suggest that each of the succeeding lessons in multiplication be taught in a similar manner:

Illustrate the work by practical demonstrations before the eyes of the class, using the numeral frame and various objects, as in teaching addition and subtraction. At first, use the denominations balls, apples, shells, blocks, etc., illustrating with the objects themselves; then use denominations without illustrating; and, finally, use the abstract numbers simply, thus:

How many are 1 ball and 1 ball? (*Illustrating with balls.*)

How many are 1 horse and 1 horse?

How many are 1 and 1?

How many are two 1's? One 2?

How many are two times 1? One time 2?

Use a number of different objects in illustrating this step; and when the answers are instantaneous, write the final ones on the board, as they appear in the table of Lesson XXXIX, thus:

1 time 2 is 2;

2 times 1 are 2.

Then proceed by the same steps to form the next product:

How many are 1 block, 1 block, and 1 block? (*Illustrating.*)

How many are 1 doll, 1 doll, and 1 doll?

How many are 1 and 1 and 1?

How many are three 1's? One 3?

How many are three times 1? One time 3?

Place the final answers in the column on the board, as before:

1 time 3 is 3;

3 times 1 are 3.

In a similar way, lead the children to form the entire table, writing each successive product on the board as it is formed.

If a pupil hesitate in giving a product, he should be indulged at first, and allowed to work out the answer in his own mind by addition; in other words, to exercise his reasoning powers. But, as soon as possible, put a stop to the necessity of adding in order to find a product. This can be done only by constant drill on the table until it is thoroughly memorized. Addition is useful in leading children to see *how* the products are formed, but it should be borne in mind that the final aim in teaching multiplication is to train the child's memory so that, any two digital factors being given, the product will instantly come to his mind without adding.

More exercises are required for purposes of drill than can possibly be crowded into a primary text-book, which should be used only as a guide. The teacher should therefore supplement largely the exercises in the book under each table.

Division is simply the reverse of multiplication, and as such may be easily taught by utilizing the child's acquired information as to the latter process. For example, you taught the child that 3×2 or $2 \times 3 = 6$ by presenting to his eye three 2's and two 3's, thus:

$$\begin{array}{l} 2 + 2 + 2 = 6; \\ 3 + 3 = 6. \end{array}$$

It is very easy, then, to lead him to see by inspection that there are three 2's in 6, and two 3's in 6, and he will readily answer the questions:

How many times 2 in 6?
2 in 6 how many times?

How many times 3 in 6?
3 in 6 how many times?

We would suggest, therefore, that in teaching the successive lessons in division, the tables of the corresponding lessons in multiplication be used as a basis. For example, in forming the table of Lesson LIII, use the table of Lesson XL as a basis.

As in teaching multiplication, the processes should be illustrated by means of the numeral frame and objects of various sorts, at the first step, then concrete numbers should be used, and finally abstract numbers. The following is the method suggested for treating Lesson LIII:

How many are 2 times 1 ball? (Lesson XL.)
How many times 1 ball in 2 balls?
How many times 2 balls in 2 balls?
How many are 2 times 1 house?
How many times 1 house in 2 houses?
How many times 2 houses in 2 houses?
How many are 2 times 1?
How many times 1 in 2?
How many times 2 in 2?

It is not thought necessary to form the table of 1's in division; therefore, write only the answer to the last question on the board, thus:

2 in 2, 1 time.

Proceed in the same manner to find the next quotient:

How many are two times 2 gloves?
How many times 2 gloves in 4 gloves?
How many are 2 times 2 farms?
How many times 2 farms in 4 farms?
How many are 2 times 2?
How many times 2 in 4?

Write the answer under the preceding one, thus:

2 in 4, 2 times.

In the succeeding steps, use both factors as divisors in forming the division table, thus:

How many are 3 times 2 pencils?

How many are 2 times 3 pencils?

How many times 2 pencils in 6 pencils?

How many times 3 pencils in 6 pencils?

How many are 3 times 2 wagons?

How many are 2 times 3 wagons?

How many times 2 wagons in 6 wagons?

How many times 3 wagons in 6 wagons?

How many are 3 times 2?

How many are 2 times 3?

How many times 2 in 6?

How many times 3 in 6?

Write the last two answers on the board, thus:

2 in 6, 3 times;

3 in 6, 2 times.

Proceed in like manner to complete the table of 2's and the succeeding tables of division. It will not be necessary to memorize the division tables if work on the multiplication tables has been thorough. For, if the latter have been mastered, when a product and one of its factors are given, the children should be able to give the other factor instantly after they have learned the simple process of division.

As in multiplication, the exercises under each lesson in the book should be supplemented by others until every step of the table is thoroughly learned and impressed on the memory.

For convenience in written exercises, the signs of multiplication and division may be taught as soon as those subjects are taken up.

The Review Lessons from LXII to LXXVIII inclusive should receive careful attention, and no child should be allowed to go into an advanced class whose work on review is unsatisfactory. It follows that he does not fully understand his work thus far, or that he is insufficiently drilled, and in either case it is folly to give him more difficult work to do, and work that presumes thoroughness in what has gone before.

Lesson LXII, except the table, and Lessons LXIX and LXXI embrace what is commonly known as "lightning calculations." They should be extended at the discretion of the teacher, and the four processes of addition, subtraction, multiplication and division should be included. It is well to vary the order of the processes in different examples. In schools where the teacher is pushed for time, in place of reciting these exercises orally, they may be used as slate or board exercises. Commence the work by pausing after each process a few seconds. Make these pauses shorter and shorter as the class becomes skilled, and have only the final results uttered or written. If a class is sent to the board to work, number the pupils in consecutive order as they stand at the board, and give the odd numbers one example and the even numbers another, in order to prevent copying or prompting.

In teaching the tables in Lessons LXXIX to LXXXVIII inclusive, the teacher should supply himself, so far as possible, with the actual measures of value, weight, etc., and demonstrate before the class, for example, that "2 pints make 1 quart" by filling the

pint cup twice, and pouring its contents into the quart cup. A very good plan in teaching many of these tables is simply to teach the *names* of the different measures, and have the children find out for themselves by actual experiment in the class-room how many of one measure it takes to make the next higher. The tables taught in this way will be learned with interest and will be *remembered*. Whereas, if simply made a matter of rote, they are apt to convey but little information; consequently, they are devoid of interest and are speedily forgotten.

XI.

ARITHMETIC.—CONCLUDED.

THIRD YEAR.

BEFORE beginning the advance work of the third year, give the class a thorough review of the Primary Arithmetic. It will be sufficient, ordinarily, to have the children perform the work of the regular review lessons of that book, which are to be found on pages 23 to 26, 38 to 40, 52 to 55, 66 to 83, inclusive, and on page 94. As before stated, pupils who find any difficulty in solving the problems contained in these review lessons are not prepared to advance, and should be kept in the Primary Arithmetic class until they are thoroughly proficient. Bear in mind that, in the study of Arithmetic especially, one step must be *mastered* before another is attempted. Progress is necessarily slow, and the golden rule is, "Make haste slowly."

Mental and Written Arithmetic should be taught together to save labor and time. Therefore, after completing the review of the Primary, as suggested, have the class begin work in both the New Intellectual and the New Practical Arithmetics. Let the mental and written instruction alternate, and, as far as possible, have the work in the Intellectual Arithmetic precede work on the corresponding subject in the Practical Arithmetic. It is proposed to complete the work in both books as far as the subject of fractions during this Third Year.

A clear understanding of the terms used in arithmetic is absolutely necessary, and all definitions should be carefully memorized. Principles and rules should also be required as they are given in the book, because these can not be given clearly in fewer words. The thought, of course, must be explained with great care to avoid "parrot work," caution against which can not be repeated too often. But, after the thought is grasped, demand exactness of expression, which is one of the most important aims in the study of arithmetic.

Before beginning the third year's work, the children are supposed to understand the four fundamental processes, and to be able to solve simple problems within the limits of 100. They are now supposed, also, to have arrived at an age when they may properly be required to *analyze* the different processes; that is, to state clearly and concisely each step of a solution.

In teaching analysis, care must be taken not to allow repetitions, or indeed any unnecessary verbiage. Wordy analyses not only involve a waste of time, but they *obscure* the reasoning rather than make it clear. The old method of requiring a child to separate his analysis into four formal steps, two of which were usually needless repetitions, has been abandoned by all advanced teachers, who have adopted in its place the simplest and most concise form of statement consistent with clear reasoning. The Model Solutions in the Intellectual and Practical Arithmetics give all the steps necessary to a thorough understanding of a problem, and give them as concisely, perhaps, as can well be done. The children should be required to follow these models in their exercises in analysis.

Exercises in analysis should not be confined to work

in mental arithmetic. The written work should be analyzed in the same way. The latter differs from the former only in that it requires mechanical work (the operation) in addition to the mental work. Both forms of work are useful, and each has a particular purpose.

The tables of addition, subtraction, multiplication, and division in the Intellectual and Practical Arithmetics, carry the work a few steps beyond the corresponding tables in the Primary book. All of these tables should be learned and recited, but the multiplication table should be memorized so that each product, up to $12 \times 12 = 144$, can be given by every member of the class the instant that the factors are presented.

Prepare for the class as large a number and variety of original exercises, both mental and written, as you possibly can. Such original exercises are far better in certain respects than those given in any book; for, despite every caution, answers to the latter are liable to be copied from keys, or marked in the old books, and thus the object of the exercises is defeated.

It is unwise to assign work in arithmetic to be performed by the children out of school hours, for almost invariably those children who most need the exercise will procure assistance in place of endeavoring to do the work themselves, and again the object of the exercises is defeated. The consequence is that the class develops very unevenly; some of the pupils making rapid mental progress, and others dragging behind hopelessly. Much supposed natural incapacity may be suddenly removed by the discovery that those "naturally incapable" are neglecting their work. The teacher should therefore carefully watch them, and see that they actually perform the work assigned them.

FOURTH YEAR.

In the Fourth Year, the class should continue alternate recitations in mental and written arithmetic, and it is suggested that the work be extended to the subject of ratio in the Intellectual, and to percentage in the Practical, Arithmetic. That is, the arithmetical work of the entire year is devoted to the study of fractions, both common and decimal. This includes the work ordinarily performed in graded schools during the fifth year.

In teaching fractions, illustrate by actual objects, as in the first steps in teaching whole numbers. Show the class that there are two halves in one whole apple by dividing an apple into two equal parts. Demonstrate the importance of the word *equal* by dividing an apple, or other object, into two parts which are not equal. Neither part, in this case, will be a half.

Illustrate $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, etc., in the same way. By this method, the class at once gain a clear, accurate idea of fractional parts. They *see* that $\frac{2}{2}$, $\frac{3}{3}$, $\frac{4}{4}$, etc., make one whole, or unit, without waste of words.

The difference between a proper and an improper fraction should be practically illustrated, and the reason for so naming the latter will be immediately apparent. Continue to illustrate each step by objects as you advance.

Before giving Lesson XXVII of the Intellectual Arithmetic to the class, illustrate with objects the fact that the same fractional part of a unit can be expressed in a variety of *terms*; that is, by a variety of numerators and denominators (see definition of "terms," page 47, Intellectual Arithmetic). Thus, $\frac{1}{2}$ of an apple can be

divided into two equal parts, and the $\frac{1}{2}$ becomes $\frac{2}{4}$; or, it can be divided into three equal parts, and the $\frac{1}{2}$ becomes $\frac{3}{6}$; divided into four equal parts, $\frac{1}{2}$ becomes $\frac{4}{8}$, etc. The class will readily see that $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$, etc., all express the same quantity; *i. e.*, $\frac{1}{2}$ of one apple. Continue the illustration by the division of $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, etc., into two, three, four, etc., equal parts. When the children understand this, they can easily understand, also, what is meant by "reducing a fraction to its lowest terms."

The use of objects should be abandoned whenever the teacher finds that it is no longer necessary to a clear understanding of the subject, but it may be found advisable to resume this method occasionally when any unusual difficulty presents itself.

It may occur to some teachers that there is too great disparity in the amount of work assigned for the third and fourth years. It is true that, as far as the number of pages covered in the Practical Arithmetic is concerned, there is a disparity; but it must be borne in mind that the work assigned for the third year is very largely a review and an extension of principles taught in the two preceding years. Whereas, the subject of fractions opens an entirely new and quite a difficult field; and the work assigned for the fourth year will be found ample, even under the most favorable circumstances, to occupy the time.

FIFTH YEAR.

Percentage and its applications are made the special objects of study this year. The subject of ratio is introduced in the Intellectual before percentage; but, if thought best, it may be omitted until that subject is taken

up in the Practical Arithmetic, at the beginning of the Sixth Year.

It is true that the study of percentage, and its applications, possesses peculiar value for those pupils who intend to follow certain mercantile pursuits; but a fair knowledge of the subject is valuable to men of almost every occupation, and should therefore receive careful attention.

The subject is so fully treated in the Practical Arithmetic that additional explanation here seems uncalled for. Lessons in the Intellectual Arithmetic, as before suggested, should precede the corresponding lessons in the Practical Arithmetic.

Unless the subject of ratio be postponed, the Intellectual Arithmetic should be finished this year.

SIXTH YEAR.

The work of this year, from ratio to the close of the Practical Arithmetic, with the exception of arithmetical and geometrical progression, is essentially practical in nature, and a knowledge of the subjects treated is useful, if not necessary, to all.

The number of examples given in the book is necessarily limited, owing to the number of subjects treated, and to the condensed form demanded in a school textbook. The examples in the book should be largely supplemented by the teacher, and the latter should endeavor to make his original exercises as practical as possible.

It has been frequently suggested that teachers should supply exercises for their classes in addition to those

given in the several text-books. Many teachers may find it impossible to devote the time necessary for the proper preparation of such exercises; and, unless the exercises are most carefully prepared and graded, they will usually be found of little service. To such teachers the use of "Ray's New Test Examples in Arithmetic" is recommended, which will furnish them the necessary number and variety of exercises to supplement the work of each year. The exercises of this book are practical in their nature, all mere puzzles having been excluded. We can not give a correct idea of the book in any better way than by quoting from the preface of its author, Mr. B. O. M. DeBeck, formerly a teacher in the public schools of Cincinnati. He says:

"No example has been introduced which the average pupil can not solve without assistance, and no solid progress can be expected unless this is required.

"The examples in each article have been carefully graded, the first few being suited to very young pupils, while the last half would furnish work for advanced pupils whose time is limited.

"Attention is called to examples occurring in pairs, where a slight variation in statement changes the nature of the problem.

"In each article, the number of examples presented is made to depend upon the difficulty and importance of the particular subject presented."

The book covers the entire ground of Ray's New Practical Arithmetic, and is bound in two forms,—with answers and without answers. The latter, if so desired, may be placed in the hands of the pupils; while a copy with answers, in possession of the teacher, will save him much time and trouble.

BOOK-KEEPING.

If the older pupils have the time and the inclination to extend their mathematical course beyond the ordinary limits of the common school, they can do so in no way that will afford a better return for the time and labor expended than by taking a short course in book-keeping.

In many cities and towns, book-keeping is made a requirement in the regular course of the public schools; but the necessity of the study is fully as great in the country schools, owing to the fact that there is a very general lack of information on the subject in country neighborhoods.

A knowledge of book-keeping can be turned to practical account by every man and woman, no matter what his or her vocation may be. Few professional men, farmers, artisans, or tradesmen are able to keep a set of books for themselves, and few are willing or able to pay a clerk for the purpose of having their accounts accurately kept, even if such a clerk were easily obtained. Therefore, these classes of men are notoriously poor "business men." They rarely know exactly what their financial condition is. Debts accumulate unexpectedly; collections are overlooked; and notes fall due at the most inconvenient times, without any preparation having been made to meet them. Confusion in financial matters usually results, sooner or later, in disaster, and all for the lack of a little system and order, which could readily be secured by a knowledge of rudimentary book-keeping, and a very limited expenditure of time and trouble.

Even those whose affairs can be managed well enough,

in their opinion, without the trouble or expense of book-keeping, must appreciate the value of fully understanding the accounts of the store-keeper and others against themselves. Thus, a knowledge of book-keeping is useful to nearly every one, whether the books kept are his own or another's.

Not only the accounts of the profession, the farm, and the trade should be accurately kept, but also the accounts of the living expenses of the household, for in no way are economy and thrift more certainly made possible and encouraged. With the figures before you, it is comparatively easy to see where there has been unnecessary outlay, and where you can most readily cut down expenses. The wife, daughter, or son can and should keep these household accounts, rather than the head of the family, whose time, generally, is too fully occupied with other affairs to give these proper attention.

Women, too, in the present day, are gradually making their way into the book-keeping situations of business houses in our cities and towns. In the cities they are regularly educated for these positions, and a respectable girl who is so educated often obtains a situation which provides a comfortable living for herself, and perhaps for her family as well, in place of being forced by a lack of such knowledge to accept a miserable pittance of two or three dollars a week as an overworked shop-girl or seamstress. It therefore behooves both boys and girls to add a knowledge of book-keeping to their store of useful acquirements whenever it is made possible to do so.

A knowledge of book-keeping does not involve, as some seem to think, the necessity of a two or three

year's course at a business college. It is true that if a man intends to become a professional book-keeper,—an *expert*,—such a course is advisable; but one may learn all that is necessary to be able to keep an ordinary set set of accounts in a perfectly accurate and clear manner by a few months' careful study of a manual especially adapted to this purpose. The Eclectic Complete Book-keeping is just such a manual. The few necessary terms, such as debit, credit, etc., the classification of accounts, and the titles of accounts are carefully and lucidly explained. The various books necessary are described, and sample pages of each are shown. Then, four illustrative sets of transactions are given, two of which are accompanied by the corresponding pages of the Day-book, Journal, Ledger, Cash-book, etc., with the various transactions of the two sets properly "written up." With these models before him for reference, the student is required to write up properly the transactions of the two remaining sets, and also certain particular problems, which are accompanied by particular instructions. Various suggestions are made where there is a choice between different methods of entry, and the entire subject is made so clear and simple that its thorough understanding presents but little difficulty to an ordinary mind.

Samples are given of the various forms of commercial paper, just as they actually appear, in script, including notes, drafts, acceptances, checks, etc.

The business of joint stock companies is briefly and clearly explained, and sample pages of the Installment Scrip Book, Certificate and Transfer Book, and the Capital Stock Ledger are presented.

Special accounts and books, such as a Pay Roll, Phy-

sician's Diary, Farm Accounts, Farm Record, Farm Register, and Family Expense Account receive brief treatment, but ample to enable a pupil to understand each thoroughly, and to keep the accounts if it should become necessary to do so.

The entire book contains less than 150 pages of subject-matter, and can be thoroughly mastered, with careful teaching, in a few months' time. The manual is accompanied by a key, which will enable any teacher to master the subject and to teach it without the least difficulty. There is also a complete set of book-keeping blanks, consisting of a Day-book, Journal, Ledger, Cash-book, and Bill-book. These blanks, which are in book form, have been expressly prepared to accompany the manual. They are of sufficient size, and are properly ruled for the use of students in writing up the work required by the manual.



GEOGRAPHY

XII.

THE ECLECTIC ELEMENTARY GEOGRAPHY.

COMPLAINT is justly made that children ordinarily receive but little benefit from the study of geography in our common schools. Pupils are confused by unintelligible statements about "imaginary lines," the earth's "turning over," "zones," and many similar terms and expressions, the simple statements of which convey no information whatever to a child's mind. The pupils are hurried confusedly through mathematical, physical, and political geography, and are compelled to memorize the words of many definitions concerning which they may not have a single clear idea. They are then crammed with the names and localities of places—many of them so unimportant that they are never heard of outside of the school-room—and with endless statistics of areas, populations, and crop productions impossible to remember. Why wonder that a child so taught has a vague idea that "the equator is a lion running around the earth," a definite conviction that Maine is yellow and New Hampshire red, and a grave uncertainty as to whether the population of the United States is 50,000,000 or 5,000,000!

The reason such poor results are obtained from teaching geography is because many teachers blindly follow whatever text-book may be in use, sticking persistently to the book, and never offering the slightest assistance

to their classes in the way of illustration or explanation. Thus, even if the book happens to be a good one, it is not used, as it should be, to the best possible advantage.

The teacher should make the subject a study, first, to decide what and how much to teach; and second, how to teach it with the greatest probability of successful results. By successful results, we mean so that children will retain a store of information which will be useful to them in after life. No matter what text-book is used, it should be used only as a guide, and its subject-matter should be supplemented or cut down as, in the teacher's judgment, necessity requires. Text-books are made to answer the general demand, but each teacher must be a law unto himself as to what to teach and how to teach it.

We repeat the warning given as to other subjects,—not to talk over the children's heads. By this, however, it is not meant that you should not attempt to develop ideas, although these ideas involve facts beyond the clear appreciation of any human mind. For example, the idea of the revolution of the earth on its axis involves the fact that we are whirling about a center at the rate—at the equator—of more than a thousand miles an hour. And while we are entirely unable to perceive the latter fact through our senses, yet this should not prevent our endeavor to give the children a clear idea of the revolution of the earth once in twenty-four hours. Astronomical distances are still more inconceivable, but that fact should not prevent instruction as to the yearly journey of the earth around the sun, and the consequent change of seasons. It is not to be expected that children will fully comprehend all that is involved in the science of geography, but they can be taught in simple

language, and by means of practical illustration, to understand the simple facts at the basis of the science.

The subject of geography opens up a wide and interesting field for composition work, and should be thoroughly utilized in this direction. The two branches mutually assist in adding to the interest of the class in both studies, and information put into writing is apt to be remembered, while that which is the result of the mere memorizing of a text-book is usually soon forgotten.

The teacher can add very much to each day's recitation in geography by reading or narrating to the class little incidents or interesting facts gleaned from history or authentic books of travels, and connected with cities or localities. This plan, in addition to aiding the memory, relieves the subject of monotony.

At first the teaching of geography should be oral. Many facts properly included under this head should receive preliminary treatment in object lessons, such as facts concerning the different kinds of soils and minerals, the vegetable and animal worlds, etc., etc. These facts, if properly classified and taught, prepare the way for the study of geography proper, which should not be begun until the child is ten or twelve years of age. It is useless and injurious to crowd a multiplicity of subjects on the young child; and, up to the age named, reading, writing, and arithmetic, with attendant language and object lessons, will be ample to occupy the time profitably.

Teach primary geography *objectively* as far as possible. A large school globe is desirable, but if it is not to be had, a ball or orange may be made to answer fairly well. Molding-sand can be used to advantage for

certain purposes. Walks in the country, with talks about the hills and the valleys, the flow of the streams, the vegetation and the soil, the state of the weather and the season of the year, the fog and the rain, the heat and the cold,—all should be used to illustrate the subject and to interest the children. These are things that can not be put in a text-book, but on their proper use depends to a large extent the success of every teacher.

The training of the imagination is one of the most useful purposes of geography, and this faculty must be called into active play in this study from the very beginning. The knowledge of things seen must be utilized to develop correct ideas of the unseen. Thus, a globe or a ball is used to develop the idea of the great round world; a little creek, or even a gutter, may be used to illustrate a great river; a level field, to give an idea of many miles of a plain; a small hill or ridge, to illustrate the mountain peak or range, etc., etc. For example, in teaching the opening lesson in the Eclectic Elementary Geography, illustrate the fact that the earth is a great ball moving, unsupported, through space; by means of soap bubbles floating in the air. Blow the bubbles, and let the class watch them as they move. Now, tell the children that the earth does not move first this way and then that, as the bubbles are apt to do, but that it journeys steadily on in the same direction, year after year, its path making a circle about the sun.*

* Do not confuse small children by mincing scientific terms. It is not necessary at this stage that a child should know the earth is a *spheroid*, and not a *sphere*, or that the earth's orbit is an *ellipse*, and not a *circle*, since the ellipse is so nearly a circle that it would take a microscope to detect the difference on a plan in which the radius of the circle is 10 feet.

To illustrate this last statement, pass a wire or stick through a ball, orange, or apple, and use a candle or lamp to represent the sun. Walk about the lamp without interposing your body between the lamp and the ball or between the ball and the class. Be sure to walk in the right direction, keeping the lamp on your left side. Explain that the circle of the earth about the sun, thus illustrated, is so large that it takes a year for the earth to complete it. Have each child in the class carry the ball about the lamp in the same way.

When the class seems to have a clear idea of the motion of the earth about the sun, tell them that while the earth is making this yearly journey it is also spinning around like a top. Illustrate the movement by whirling the wire in the fingers while you are walking about the light, thus showing both movements in operation at once. Tell the class that the earth is such a big ball that it takes a whole day to turn completely around once, although it is spinning fast.

In explaining what the axis is, be careful the children do not get the absurd idea that there is a rod similar to the wire extending through the earth. Illustrate by spinning a coin on the desk; this shows the *line* of the axis very clearly; but to give the idea of a sphere spinning about an axis in the same way, follow the coin illustration with the ball spun on the desk without the wire inserted.

In illustrating day and night, it is well to darken the room entirely, except from the light of the lamp or candle used to represent the sun, explaining that the sun is practically the only source from which the earth receives light. Then, by holding the ball close to the light, and turning the former slowly on the wire, the

class readily sees that one half of the globe is dark and the other half light; also, that the movement of any given spot on the globe—except within the polar circles, which, however, should not be mentioned at this stage—is constantly and steadily proceeding from darkness to light and from light to darkness. Bring out both of these points clearly: *the equal division* of darkness and light on the globe, and *the constant movement* from one to another, but develop only one idea at a time. The large illustration on page five of the book may be used also in showing the daylight and the darkness on the earth, and the school globe may be carried about the lamp in the manner suggested for the ball or the orange. Always give two or three different illustrations of the same point when it is possible.

Be careful always to turn the ball or the globe in the same direction, from left to right, otherwise you will lead to confusion when you come to illustrate the directions of the compass. To explain the latter, fix on your orange or ball a little image of a man with his arms extended, and his right hand pointing in the direction toward which the ball is to revolve. You can readily carve a rough little figure to answer the purpose, or you may use two pieces of match-sticks, etc., to represent a man with his arms extended; in this case, you should blacken or otherwise mark the part representing the face. Attach your figure to the ball in the proper position. Call the attention of the class to the fact that the axis of the earth *always* points in the same direction. Illustrate as before, carrying the ball about the light, with the axis properly inclined.

Call attention to the figure, and ask who can answer the following questions: "As I turn this ball slowly

around (*suited the action to the word*), where is the light *first* seen, at the right or at the left hand of the figure? Where is it *last* seen?" Let the child who is being questioned come close to the ball, as you hold it in position, and have him stand so that his right hand is in the direction of the right hand of the figure; or, in other words, station him facing the light with the ball directly between his eyes and the light. This point needs care in illustration, but if the directions are followed,—if the pupil stands facing the light; if the ball is held between his eyes and the light, with the axis pointing to the north star; and if the ball is then revolved in the proper direction, from left to right,—the pupils should have no difficulty in answering the question. If there should be any difficulty, persist patiently until all the children see clearly that *the light always appears on the right and disappears on the left of the figure*. When this fact is fully realized of one point in the orbit, carry the ball about the light as before, and show that the fact is true of *every* point of the orbit.

Do not use the word orbit, or any scientific terms, but lead the children to realize the *fact* by ocular demonstration, and with as few words as possible. Now explain that the great earth also turns always in one direction, so that the sun, like the lamp, invariably appears in one direction and disappears in the opposite direction. Next, teach that the direction in which the sun appears, or "rises," is called *East*, and the direction in which it disappears, or "sets," is called *West*. Ask: "Who can point to the direction in which the sun first appears in the morning? In which direction is east? Who can point to the direction in which the sun sets in the evening? In which direction is west? Stand with

your arms extended, with the right hand pointing to the east and the left hand pointing to the west. Now, children, when you stand in that position, with your right hand pointing to the east and your left hand pointing to the west, the direction directly in front of you is called *North*, and the direction directly behind you is called *South*. Now, who can tell me which direction is in front of you? In which direction is north? Which direction is behind you? In which direction is south? Lower your hands. Point to the north; to the east; to the south; to the west. Face the east; the west; the north; the south," etc., drilling until the four directions are perfectly familiar.

In explaining the compass, by all means have the instrument itself to show the class. Carry it with you on your walks, and teach the children to use it by locating the different cardinal points in various localities.

In teaching the lines of the earth, a globe should be used. If the school does not possess one, use a ball or an orange, and draw the equator (a thread will serve for a mark), the parallels, and the meridians upon it. Be sure the children do not get the erroneous idea that these lines are actually marked on the earth's surface as they are on the globe or ball.

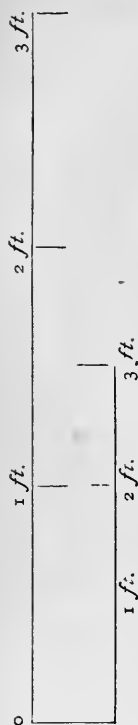
By means of a globe or a ball properly marked, it is very easy to show a child that a degree of longitude at the equator is much longer than a degree of longitude at the arctic circle, although they are measured by the same meridians. But by merely memorizing the statement of this fact in a book, few if any children will have the remotest idea of what is meant or how such a thing could be.

Explain with the globe the statements in the book re-

garding north and south latitude, and east and west longitude. When the children understand the terms fully, drill them by having various points found on the globe when the latitude and longitude are given.

The different divisions of land and water should be illustrated, as far as your particular locality admits of it, by pointing out to the children an actual cape, hill, bay, spring, etc. Few localities present many of the divisions, but, as before suggested, those which are accessible may often be used to develop correct ideas of those which are not. A tray full of molding-sand will enable you to form all the land divisions, and the banks of any little creek will afford you material for illustrating the definitions of both land and water divisions in miniature. This kind of work will interest the children, and they will remember the definitions so taught much more readily than by merely studying the statements in the book. Have the children themselves do as much work of this kind as may be necessary to fix the several definitions in their minds.

In teaching what maps are, have the children make maps, first of the school-room, then of the school-yard, then of the neighborhood of the school, and of different familiar localities, etc. Begin by showing them what a *scale* of distances is, and why one is necessary to understand a map rightly. Thus, show them that while you can not draw a map of the school-room floor on the blackboard, making the map of the *same size* as the floor, yet, by measuring the latter, and representing each foot of the floor by a distance of one inch on the board, you can draw a map having the *exact shape* of the floor, with all the benches, desks, the stove, etc., in the right positions, so that a person who had never seen



the room could form a very clear idea of its size, shape, and arrangement by simply looking at the map *and consulting the scale* on which it is drawn.

To show *why* it is necessary to know the scale on which a map is made, draw two maps of the room floor on the board, using for the first a scale of one inch to the foot, and for the second a scale of half an inch to the foot. Draw the scales on the board, as in the margin, placing each scale under its proper map. Explain that the two maps represent the same floor; but, if it were not for the scales, we might think the maps represented different floors, one of which was much larger than the other. Again, draw a map of some imaginary room, and, without showing any scale, ask how wide a room or how long a room it represents. As it is impossible to answer these questions, the children will at once perceive the necessity of having a scale given in order to determine *size* or *extent*.

Next, give the children as much practice as possible in measuring actual distances and reducing them to various scales. As they are presumed to be able to work problems in ratio and proportion by this time, the mathematical part of the work should present no difficulty.

When they show themselves proficient in reducing simple lines to a scale, have them employ the lines of length and breadth in figures representing certain simple areas, such as the school-room, school-yard, their own farms or places, etc., as before suggested.

The important aim of this work is to accustom children to view a map in its proper light: namely, as a mere representation in miniature of a certain extent of country. Children should have sufficient practice in this kind of map-sketching to fix firmly in their minds the correct idea of what a map is before the maps in the book are made a subject of study.

Before taking up the map of the world on pages 11 and 12, you should use the school globe, if you have one, in teaching the hemispheres, the grand divisions, the principal islands, the oceans, and the seas. The first point to be made, and a most important one, is to have the children fully comprehend that the globe is simply a miniature representation of the world on which we live. Let it be your constant effort in teaching geography to carry the minds of the children from the representation to the thing represented, from the map of a country to the country itself, and from the descriptive text to what is described. Do not allow the globe to be studied simply as a wooden ball covered with paper, on which various colors, lines, and names are printed. Picture to the child's imagination, as vividly as you can, the great round earth, made up of land and water, with the continents and islands raised above, or, as it were, standing out of the oceans. When the children have this picture in their minds, tell them that the globe is made to *represent* the earth, just as a very small toy house could be made to represent accurately the outside of a great palace.

Point out on the globe, first, the continents, and then each of the grand divisions. Have the children point them out as they are named, and name them as they are pointed out, repeatedly, until all are perfectly

familiar both as to name and locality. Next, the oceans should be pointed out on the globe, and their locations with reference to the continents should be learned as well as their names. Drill as on the continents and grand divisions. The principal islands, seas, etc., may be taught in the same manner. Teach that the map on pages 11 and 12 is simply another way of representing the surface of the round world, and that all other maps in the book are representations of only *portions* of the earth's surface *drawn on a larger scale* than this first map. Illustrate by contrasting North America, as represented on pages 11 and 18. Follow this by contrasting the United States on pages 18 and 22, 23; then contrast your own state as shown on pages 22, 23, with the sectional map of the state given in the book. In this way the child is led to look at a sectional map in the right light as representing a portion of the earth's surface. He will not be so apt then to study it as a mere isolated conglomeration of colors, lines, and names. It is suggested that each map be traced back in this manner through the decreasing scales until the portion under study is located on the map of the world or the globe, and that the children be taught to bear this location in mind while studying the larger map.

Relief globes and maps, and moldings in sand, are used by some instructors in teaching the structure of continents, but there is, we think, a very grave objection to their use, as they must necessarily give most erroneous ideas of elevations of land as compared with continental distances. We think it is a fact conceded by all teachers that it is better to develop no ideas at all than to develop wrong ones. First impressions are notably strong. Why, then, should children be taught

the monstrous absurdities portrayed on relief globes and maps, and by moldings of continents, only to be compelled to fight against these first impressions for the remainder of their lives? Few teachers seem to realize how great the distortion generally is on a relief map or globe. For example, the highest mountain in the world, Mount Everest is about 29,000 feet high; and when you reduce our world—about 7,900 miles in diameter—to the size of a school globe 2 feet in diameter, Mount Everest would be represented properly by a speck not $\frac{1}{50}$ of an inch high. Again, let us consider the proper proportions of a section extending across the United States on the parallel of Mount Whitney, the highest mountain in the United States. This mountain is nearly 15,000 feet high, and on its parallel the continent is about 2,500 miles wide. If, then, we represent the mountain by an elevation one inch in height, our section must be made 1,056 inches, or 88 feet in width. Now consider the distortion of the ordinary molding in relief of the United States—say, with the mountains elevated at least an inch above sea-level, and with a breadth of continent not more than 40 inches. This would either represent Mount Whitney as $62\frac{1}{2}$ miles high, or the continent as only 114 miles broad. Does not such teaching inevitably do more harm than good? It seems to us a much better plan not to bring these widely differing extensions into comparison until the child has arrived at an age when he can realize to a certain extent the vast difference between them.

We do not mean to imply that relief should not be taught at all in primary classes. On the contrary, it can be very successfully taught. Show a child a hill; tell him its height, and then contrast this with the

height of a mountain. He will readily follow you, and you have taken one step in teaching the relief of the globe. Again, show him a sloping field crossed by an abrupt ridge, and you can easily lead him to imagine the long gradual slope from the Mississippi River to the Rocky Mountains, and so on with other continental features, until the child can see in his mind the continent as a whole, with its mountain ranges, river valleys, and coast plains, probably in a much truer light than that presented by distorted piles of sand, etc. We believe in teaching relief, but we do not believe in teaching wrong ideas, or in attempting to teach proportions impossible of conception.

The use of molding-sand should be confined to the formation of the geographical forms usually defined. It is easy to teach the children to make an island, a promontory, a cape, a plain, a plateau, a hill or mountain, a mountain chain, an isthmus, etc., but this method of illustration is not well adapted to teaching the forms of continents or their structure, neither is it sufficiently exact in ordinary use for teaching those facts usually acquired from maps. Molding-sand can not take the place of globes, maps, or books on geography.

Great care must be taken that the children, in studying maps, do not get erroneous ideas of directions. North is almost invariably toward the top of a map; but do not allow the children to gain an idea, because of this uniformity, that north means *up* and that south means *down*. There is danger of this, especially when wall maps are constantly used. A case is on record where a school visitor asked the children to point to the north, and the entire school pointed directly over their heads. With correct and careful teaching, such a blun-

der would have been impossible. North means in the direction toward the north pole, and south means in the direction toward the south pole; up means in the direction toward the zenith, or overhead, and down means in the direction toward the center of the earth, or underfoot. These latter definitions are not arbitrary, of course, for up also means from a lower to a higher place, and down means the reverse. Thus, *down* from the top of a hill may be in every direction of the compass; and, from the base of the hill, you may be able to go up in every direction of the compass; but, from either top or bottom of the hill, there is but one north direction and but one south direction. We dwell upon this point because it is important that the distinction between the various terms should be impressed upon the minds of the children before they commence to study maps.

In teaching the zones in the elementary class, it is undesirable to go into any explanation of *how* the boundaries of the different zones are determined, as the subject is considered too difficult for the comprehension of young children. This explanation is treated fully under the corresponding head in the Complete Geography; but in the Elementary, only so much is said about the zones as is necessary for a clear understanding of the succeeding topics of climate, plants, and animals; the races of men, their manner of living, and their occupations.

In teaching climate, ask: "Who can tell from the definitions in the book in which zone we live?" If this question can not be answered at once, draw out the fact by a series of questions until the children realize that they must be living in the temperate zone. Then

point out the different zones on the globe, or, if the school does not possess one, on the map of the world, and show them as nearly as possible the spot where they live.

In teaching plants, illustrate the subject as far as you can by specimens of the various plants, bits of woods of different kinds, etc., etc. Have the class bring you as many specimens as possible of the vegetable products of their zone, and incite them to secure a wide variety. If any important products of the temperate zone are not to be obtained in your neighborhood, make a list of them, and teach the children any interesting facts you may know about them.

While the illustrations on page 13, and similar illustrations throughout the book, are exceedingly useful, yet the lessons they teach should be supplemented where it is possible by showing the children the living animals. A zoölogical garden or a good menagerie is a most useful and intensely interesting means to this end; but the children should be accompanied to such places by a person who is competent to tell them the names of the animals, where they live, their habits, their uses, etc.

The manner of living and the occupations of men depend largely upon the zone in which they live; thus, agriculture and manufacturing could not be carried on in the frigid zone. By judicious questioning, and by explanation where necessary, show how different countries, or parts of countries, are peculiarly adapted by nature to certain pursuits. Also, demonstrate the importance of commerce, showing that by this means it is possible for almost any place to be supplied with the products and manufactures of the entire world.

It will be observed that the maps of the Elementary Geography are exceedingly simple. Except on the sectional maps of the United States, only those rivers, mountains, cities, etc., are shown which, it is considered, should be taught to every child, and in such a way that he will be able to locate them promptly as soon as they are mentioned. The sectional maps of the United States are fuller in detail, as children should be more fully instructed in regard to their own state than any other. The less important cities of the section not in the child's own state may be omitted in map work at the discretion of the teacher.

The text of the Elementary Geography is absolutely free from statistics, from unimportant details, and from repetitions. Therefore, all that is given should be learned, and the teacher can not go wrong in demanding that the entire text shall be learned thoroughly.

In reviewing, it will be well to bear in mind the relative importance of the topics as presented in the book. Ask only general questions on the geography of the world as a whole. Let the questioning be a little fuller on the grand divisions. That on the different political divisions should be graduated in accordance with the importance of the several nations as related to our country and their own importance in the history of the world. The geography of the United States should receive careful attention, and your own state especially should have full treatment, the questions embracing all that is given in the book, both on the map and in the text.

XIII.

THE ECLECTIC COMPLETE GEOGRAPHY.

THIS book has been so arranged, by the use of two sizes of type, that, if the time is limited, a short course, complete in itself, can be adopted. The full course includes the entire text, embracing both the large and the small type. Much of the explanatory matter, and the less important particulars, are put in small type, and may be omitted without interfering with the arrangement or connection of the large type. The latter used alone constitutes the short course. The questions on the text are confined to the short course.

The matter in small type, however, should in no case be disregarded entirely. Even where the short course is adopted, and this small type is not recited, the teacher should suggest that the pupils read it carefully. It contains much interesting and valuable information, and in many cases will assist materially in understanding the accompanying text in large type.

The preliminary treatment of mathematical, physical, and political geography should be taught in a manner similar to that suggested for these subjects in the Elementary Geography. In the Complete, the treatment is, of course, much fuller than in the Elementary, and is somewhat more difficult to understand. Every statement that admits of it should be fully illustrated. Have the children themselves perform all the illustrative experiments, such as showing the two movements of the

earth in combination; how the directions east, west, north, and south are determined; the changes of season, how the zones are formed, etc., etc. In reviewing the preceding day's lesson, select some pupil to make the necessary explanations to the class, just as you made them on the previous day. Nothing will impress the facts on a child's memory so indelibly as this class of exercises.

The statements in a text-book of this nature are necessarily very concise. Do not limit your instruction to these concise statements, however, where a development of the ideas they set forth seems desirable. For example, on page five, under mathematical geography, article 2 (*a*), explain the statement, "This would not be the case if the surface were flat," by telling explicitly what *would* be the case, and *why* the masts would disappear before the hull. If you can draw these explanations from the pupils themselves by judicious questioning, so much the better; but, at all events, the full explanations should be made in one form or another. The pupils should not be allowed to stumble along in the dark as to the meaning of what they study, simply memorizing words.

Show by experiment in the sunshine, or with a light of some kind, that a sphere is the only body whose shadow is always round, using a half sphere, a coin, and various objects besides a sphere.

In teaching directions of the compass, pursue the same plan as in this elementary class. The two classes may be given the lesson together.

In teaching the circles of the earth, show by experiment, using an orange or wooden ball properly cut, that the circle which divides a sphere into two equal parts

must pass through the center of the sphere, that all such circles are of the same size, and that any circle which does not pass through the center of the earth is smaller than one that does.

Explain with the globe why meridians are only semi-circumferences, while the parallels extend entirely around the globe.

Explain why the meridian of Greenwich is taken as the prime meridian rather than that of London. The national observatory is at Greenwich.

Exercises in finding points on the globe when the latitude and longitude are given, should be continued long enough to assure the teacher that the entire class understands the meaning and use of parallels and meridians.

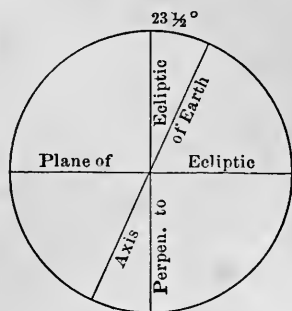
The motions of the earth should be illustrated as in the Elementary Geography by means of a ball transfixed by a wire, the sun being represented by a light of some kind.

Show what is meant by the sun being "over" any meridian, illustrating with a light and a revolving globe.

The simple diagram on page 166 may be readily drawn upon the board, and will be found of great assistance if used in connection with the revolving ball and lamp, in explaining how the limits of the zones are determined, the changes of seasons, the longest and the shortest days of the year, etc.

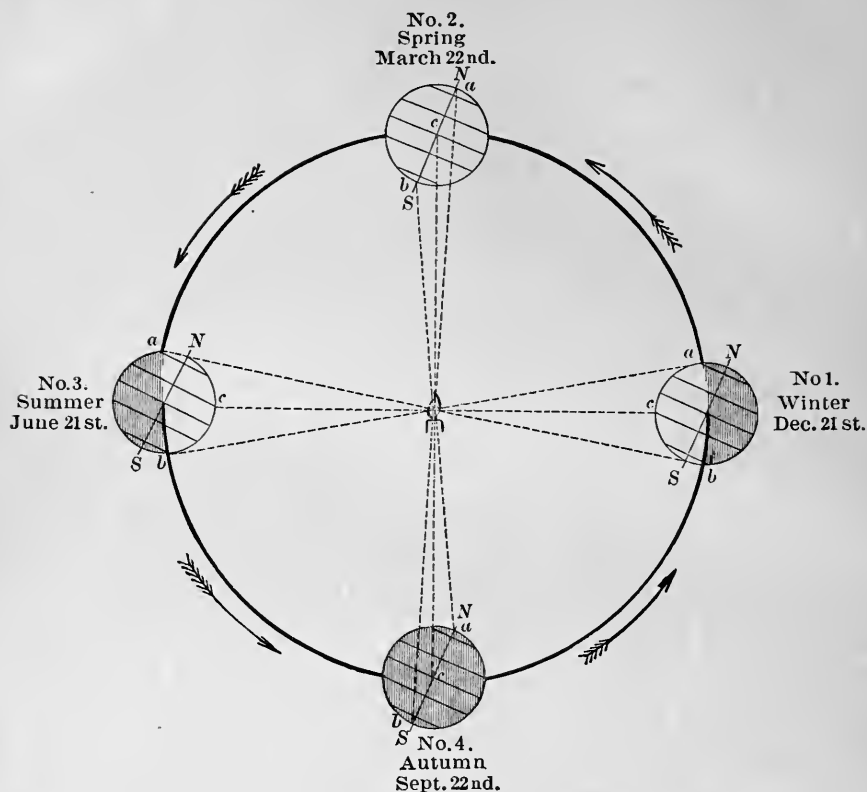
Explain, in the first place, what is meant by the inclination of the earth's axis $23\frac{1}{2}^{\circ}$ from a perpendicular to the plane of the ecliptic, using the diagram on page 7, second column, and the sketch on the opposite page of this book, which should be drawn on the board. Refer to article 15, page 6, in explaining what determines the length of a degree.

To illustrate and explain the longest and shortest day of the year, carry the globe around the light, having the axis properly inclined and kept constantly pointing in the same direction. Ask the children to note carefully at what point of the circuit the north end of the axis leans most directly away from the lamp, and at what point it leans directly toward the lamp.



When they have recognized these two points, tell them that these two positions are represented by figures No. 1 and No. 3 in the diagram on the board (see page 166). Darken the room, except from the light representing the sun, and show the class that at point No. 1 there is more darkness as compared with the light north of the equator than at any other point in the entire circuit, while at No. 3 there is more light as compared with the darkness north of the equator than at any other point in the circuit. This means, in other words, that when the earth is at point No. 1 it is the shortest day and the longest night of the year north of the equator, and when the earth is at point No. 3 it is the longest day and the shortest night of the year north of the equator. Tell the class that the earth is in position No. 1 on the 21st of December, which is accordingly the shortest day of the year north of the equator; and that it is in position No. 3 on the 21st of June, which is therefore the longest day of the year north of the equator. South of the equator the conditions and facts are simply reversed.

Now tell the class that the rays of the sun, when the earth is in these two positions, fix the limits of certain



belts or zones, known as the north and south frigid zones, the torrid zone, and the north and south temperate zones.

Hold the globe in position No. 1, and indicate with a pencil the points *a*, *b*, and *c*. The first two points mark the northern and southern limits of the sunlight on this day; *c* marks the point on which the *vertical* rays of the sun fall on this day. With the pencil at each of these points in turn, have a pupil revolve the globe, and the pencil will describe the arctic circle at *a*, the antarctic circle at *b*, and the tropic of capricorn at *c*. Then, in the same way, with the globe at position No. 3, the pencil describes the arctic circle at *a*, the

antarctic circle at b , and the tropic of cancer at c . Question the class, and draw out of the pupils the exact statements of how the limits of the torrid and frigid zones are determined, thus: "What determines the limits of the frigid zones?" *Answer*: "The frigid zones are bounded by the parallels which mark the extreme limits of the earth's surface touched by the sun's rays on the longest and shortest days of the year." "What determines the limits of the torrid zone?" "The torrid zone is bounded by those parallels which mark the extreme limits of the earth's surface touched by the *vertical* rays of the sun on the longest and shortest days of the year." Explain that the surfaces between the frigid zones and the torrid zone are called the temperate zones. Thus we have the five distinct zones in order: the north frigid zone, the north temperate zone, the torrid zone, the south temperate zone, and the south frigid zone.

Hold the globe in position No. 1, and have the class note that on Dec. 21st, which is called our winter solstice, the entire north frigid zone is in darkness; that is, at no point in the north frigid zone does the sun appear or "rise" that day. Again, at this time in the south frigid zone, the sun is visible from every point; that is, it does not "set" on that day.

These facts, and the relative lengths of day and night in different quarters of the globe on this day, are illustrated by the light and shaded portions of the diagram on the board; but they should also be illustrated by actual experiment with the light and the globe.

Explain that as the earth journeys on in its orbit from Dec. 21st, that the point a gradually advances toward the north pole, and the point b recedes towards the

south pole until at a certain point in the orbit these two points and the poles of the earth coincide; that is, at this point, represented by figure No. 2 in the diagram, the sun's rays touch the north and south poles at the same time. It is apparent from the figure that at this point exactly one half of each zone is light and the other half dark; or, in other words, the days and nights are equal in all parts of the world. Illustrate with the globe and lamp as before, and tell the class that the earth reaches this point in its orbit which is known as the vernal equinox, on the 22d of March.

The globe should be carried slowly from position No. 1 to position No. 2, and the class required to notice the gradual change of light and darkness in the two frigid zones. Demonstrate with the light and globe the changes that occur in each quarter from 2 to 3, 3 to 4, and 4 to 1, asking such questions as will lead the class to find out the facts for themselves.

Have the class notice that at every point in the orbit one half of the equator is in the light, and the other half in darkness; that is, at the equator the day and the night are always equal, and each is one half of 24 hours, or 12 hours, long.

Have the class notice also that the sun first appears at the north pole on March 22d, and does not again disappear until September 22d; that is, the day is there six months long. After disappearing on September 22d, the sun does not appear again at the north pole until March 22d; that is, the night is there six months long. This is also true at reverse periods for the south pole; that is, the day and night are equal at the poles, and each is six months long.

The explanations, illustrated by the globe and light,

the diagram on the board, and the diagrams in the book, ought to render the causes of all the phenomena of day and night, and the seasons, apparent to any intelligent child who is old enough to study the Complete Geography.

Teach the use of globes, maps, and scales as suggested for the Elementary Geography.

In teaching physical geography, even those definitions that are repeated from the Elementary should be illustrated as far as possible, but especial attention should be paid to such definitions as may be new to the children. For example, illustrate the statements regarding the Land and Water Hemispheres, page nine, article 13. Place the school globe in such a position that the diameter through the land and water centers, or "poles," will be perpendicular to the floor, turning first one pole on top and then the other. This will show at a glance the preponderance of water surface.

If possible, secure a piece of unpolished coral to show of what material the coral islands are built. The more illustrations you have of this nature, the more interesting the subject will be.

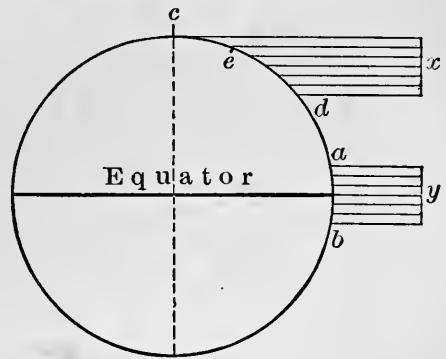
To show the motion of waves, page 12, article 36, use a rather long and heavy piece of rope. By shaking one end of this up and down, the children can follow a wave as it travels along from the hand to the other end of the rope. By this experiment the child learns that the *wave* travels, while the material or substance of which it is composed has little if any horizontal motion; the wave travels, the rope does not; in the same way the wave of water travels forward, while the water itself, unless disturbed by other influences, simply rises and falls with each succeeding wave.

As stated in article 37, the tide moves like a wave. Do not let the children get a wrong impression, from the sweeping in and out of tide waters in river mouths, harbors, etc., that the waters of the open ocean have this same regular horizontal flow back and forth. There the tides are not appreciable at all; that is, there is almost no horizontal motion of the water itself, and the slow, gradual rise and fall of the great body a few feet twice in twenty-four hours can not be perceived. It is only when the tide approaches the shore and meets with resistance from the shoaling bottom that the waters attain appreciable height and a horizontal motion. Speaking of this point, and of the *variation* in the height of the tides at different places on the same coast, J. E. Hilgard, ex-superintendent of the United States Coast Survey, says: "When the movement reaches shallow water, in approaching the shores, the horizontal motion [of the *wave*, not of the *water*] is partly translated into vertical motion upon the sloping bottom, and it is thus that the tides attain sensible vertical height. Now, where a bay or indentation of the coast presents itself, opening favorably to the tide-wave thus developed, and decreases in width from its entrance toward its head, the tide rises higher from the mouth upward. This is due to the concentration of the wave by the approach of the shores, and to the gradual shoaling of the bottom."

You should explain *how* the vapor, mentioned on page 12, article 41, is formed. Illustrate by the vapor rising from a wet shoe when held near the fire.

To show the class that the same number of sun's rays are distributed over a greater space nearer the poles than at the equator, page 13, article 58, draw the

accompanying diagram on the board. The columns x and y contain an equal number of sun's rays, and it is very evident that the distance cd on the earth's surface near the pole is much greater than the distance ab near the equator; that is, the rays that fall near the poles are more widely distributed than those which fall near the equator. Another way of stating the case would be that *more* rays fall in the *same* space at the equator than at the poles, and consequently the space receiving the most rays is the hottest. To show this, lay off the space ce at the pole equal to the space ab at the equator. It is evident that more rays fall in the space ab than in the space ce , and consequently ab is hotter than ce .



The subject of minerals, treated on page 15, article 97, and more fully on page 17, article 16, may be made extremely interesting. Specimens should be obtained if possible, showing the various minerals in their native state. Many interesting books and articles have been written in reference to the formation of coal, salt, and petroleum. The entire subject opens a wide field for instructive composition lessons.

The subject of the "Surveys of the Public Land," treated on page 26, is an important one, and should be thoroughly learned, especially in those states where the land has been surveyed in the manner described. In all such states, children should know where the base-line and principal meridian for their state are situated, and

should be drilled until they can locate any tract of 160 acres in the state.

It will be noted that in the text of the Complete Geography comparative statements are usually made in regard to areas in addition to the actual figures. It is more important that these comparative statements should be learned than that the statistics should be memorized; for if relative sizes are clearly defined in the mind, approximate areas at once suggest themselves when the area of the basis of comparison is known. Thus, a child in Indiana is taught the exact area of his own state in figures thoroughly. Knowing this, he learns that the United States would contain one hundred states the size of Indiana (page 21, article 3); and this fact, which at once gives him approximately the area of the United States, is easily retained in the memory. The same method should be used in teaching the comparative areas of different states in our own country, and the areas of the principal countries of the world as compared with the United States. That the eye may assist the mind effectively, the different sectional maps of the United States have been drawn on a nearly uniform scale, so that states in different sections can be thus brought into direct comparison as to size.

In the map work, due attention should be given to the prominent places in corresponding latitudes which are given on the side margins. There is an astonishing amount of ignorance on this subject, even among persons who consider themselves well educated; and there are few persons, perhaps, who will not be surprised at their own erroneous ideas, as developed by some of the facts brought to light by this feature of the study.

Contour lines, both in the sea and on land, should re-

ceive attention, especially those which appertain to your own state. The teacher should explain carefully to the class that those on the land represent lines of equal altitudes above the surface of the sea, and that those in the water represent lines of equal depths below the surface of the sea.

Map drawing is important as a great aid in fixing the shapes of countries in the memory. It should be commenced with the study of the maps, and every pupil should draw all the maps that are given in the Complete Geography. The teacher may use his discretion as to the reproduction of minute details, but outlines, topographical features, and principal cities should be required in all cases.

Particular attention is called to the table of definitions of foreign geographical terms on page 102. As maps of foreign countries are studied, this table should be consulted, and the more important translations should be memorized.

The general review questions on page 100 cover the ground thoroughly, and every child that is supposed to have "finished" geography should be able to answer every question on that page. An examination on these questions without special preparation will test the thoroughness of the work accomplished.

GRAMMAR

XIV.

HARVEY'S ELEMENTARY GRAMMAR AND COMPOSITION.

GENERAL REMARKS. — Harvey's Elementary Grammar and Composition is a text-book in which the topics relating to technical grammar and analysis are arranged in the order in which they should be studied by beginners. It contains carefully prepared illustrations of the method of instruction to be employed in teaching these topics. In the preparation of this manual for teachers, it has not been thought necessary or advisable to do much more than (1) to designate the parts of the course of study to which special attention must be paid in order to secure the most desirable results; (2) to suggest the introduction of supplementary exercises where they can probably be used with advantage; (3) to point out the sections that need only to be read and made subjects of conversation; (4) to emphasize by repeated statement the advice, "never to define a term or enunciate a principle without first preparing the mind of the pupil to grasp and comprehend the meaning and use of the term defined or the principle enunciated."

The "sentence-making" exercises may be supplemented indefinitely and used in all parts of the course. At first all the words to be used in the construction of a sentence should be given; then, a part of them, the pupils supplying those necessary for a complete state-

ment. When they have learned to do this readily, they should be taught that groups of words are sometimes used like single words. Single words and groups beginning with prepositions may then be written on the blackboard, and the pupils required to arrange them into sentences without changing the order of the words in the groups. The use of the clause can be taught in a similar manner. In an elementary course, the terms *phrase* and *clause* ought never be used, but each combination of words should be called a *group*, and be regarded as a single thing not to be separated into its parts. Pupils taught in this manner soon become apt critics of their own language and that of their companions.

The value of picture lessons in "composition" can hardly be overestimated. The manner in which they should first be given is illustrated on pages 22 and 23. As soon as pupils can dispense with the assistance of a teacher in the use of pictures, they may be taught to describe what is to be seen through windows or doors, to write stories suggested by pictures, and to describe scenes with which they may be familiar. Excellent results can be secured by work of this kind in high schools, as well as in schools of lower grade. To an observant teacher or pupil, the pictures that adorn the walls of so many of our school-rooms will suggest interesting themes for compositions. Any intelligent, painstaking teacher, by using the method recommended, can make this a most interesting and attractive part of the course of study. In schools in which many different branches are taught and the number of classes is large, the recitation in technical grammar should be omitted occasionally and the time devoted to instruction and

practice in composition. Much will be gained and little lost by this "departure" from the "old way."

Having been trained in sentence-making, in picture lessons, and in writing descriptions of real or imaginary events, pupils may be required to read a description of a single object several times, then to lay the book or paper containing it aside, and reproduce its leading facts from memory. The description should never be referred to while writing, either for facts or forms of expression. Work similar to this should be done until the reproduction of a description becomes an easy task. Pupils may then be required to describe familiar single objects, at first using "plans" prepared by the teacher or given in the text-book. The teacher should talk with the pupils about objects to be described, criticize "plans" submitted to him for examination, and assist in obtaining desired information, but he should insist on each pupil's using his own language in his descriptions. The description of single objects, especially of manufactured articles, buildings, etc., is excellent work for pupils in the lower classes of high schools.

The definitions of technical terms ought to be repeated in parsing exercises until they can be given without hesitation; they may then be dispensed with or given only in occasional reviews. Grammatical rules are usually statements of facts—repetition helps to fix them in the memory. Too frequent repetition, however, is wearisome and unnecessary.

Refer to the rules for the use of capital letters and marks of punctuation, as they are needed in sentence-making and composition. Pupils will thus learn the practical application of rules at the time they are learning their formal statement in technical language.

PART I.—ELEMENTARY COURSE.

Objects. Definitions.—Talk with the pupils about the senses, objects, words, language, spoken language, written language, and grammar, but do not require them to commit to memory the definitions on pages 7 and 8.

The Sentence.—Teach the subject in the manner indicated in the text. Require pupils to learn and recite the directions to be observed in writing sentences.

Sentence-making.—In developing the idea of each kind of sentence, use many illustrations in addition to those in the text. Observe the direction given on page 10. Use this lesson quite frequently as a review.

Quotation Marks.—As an additional exercise, require pupils to write sentences in which one states what another says without using his exact language. The pupil will thus learn how to write both direct and indirect quotations.

Parts of Speech.—The object of this lesson is to show that words can be divided into classes. Use the same word with different meanings, and in different parts of sentences, to illustrate what is meant by the terms *meaning* and *use*. “I saw a *drove* of cattle.” “He *drove* the cattle over the bridge.” “*Gold* is a metal.” “Mary has a *gold* pencil,” and similar sentences may be employed for this purpose.

The Noun.—Do not neglect to teach that a noun is the name of an object and not the object itself. Show, also, that by placing *the*, *this*, *that* and other definitive words before a common noun, a particular meaning is given to it without making it a proper noun. Do not omit any of the exercises. Be thorough in teaching

how to form the plurals of nouns. Illustrate each rule in assigning it as a part of a lesson.

Abbreviations and Contractions.—Require pupils to pay particular attention to the use of capital letters and the period in writing abbreviations, and to the writing of words in which the apostrophe takes the place of omitted letters. Examine critically the written exercises of pupils, and see that the work required is done correctly.

Elements of a Sentence.—Develop the idea of each part of a sentence before permitting pupils to learn its definition. Prepare oral exercises to supplement those given on page 20. Require pupils to analyze sentences orally before using diagrams.

The Verb.—Pupils should be required to fill all the blanks with appropriate words. Develop the idea of the objective element before attempting to teach the classification of the verb. Read the remarks carefully in assigning lessons, but do not require pupils to commit them to memory. Observe the directions given in the text of this and succeeding lessons.

Incorrect Language.—The “cautions” in the Elementary Grammar need not be committed to memory. Refer to them in correcting the exercises in the textbook as well as the language of the pupils in conversation and sentence-making.

Sentence-making.—Be thorough in teaching the application of the two rules given on page 29. See that the blanks in the exercises are filled with appropriate words, and that the pupils make no mistakes in the use of the comma.

The Adjective.—Require pupils to make separate lists of quality-words, pointing-out-words, and number-words

before permitting them to learn the definitions. Refer to the dictionary for definitions of the words *descriptive* and *definitive*. Do not introduce the subject of comparison in a formal way, but use adjectives in the comparative or superlative degree without referring to their forms. Tell the pupils that the articles *the*, *a*, and *an* are usually classed among the definitive adjectives.

Sentence-making.—The teacher should supplement the exercises in the lesson on page 34 by others prepared by himself. Pupils should not be permitted to slight the work required in this part of the course. Examine all written work with care, and see that pupils observe the directions given in preceding lessons.

The Participle.—Do not hurry in developing the idea of this part of speech. Show by a large number of illustrations in what particulars the participle resembles the verb and the adjective. In teaching the definitions, call attention again and again to the fact that the present participle denotes *continuance*, and always ends in *ing*, and that the perfect participle always denotes *completion*. Be sure that the pupils learn how the compound participle is formed.

The Pronoun.—Teach the definition in the manner indicated on page 42. It is not necessary that the pupil should learn the definitions of the kinds of pronouns at this time.

The Adjective Element.—Pupils generally learn readily how to distinguish this element from the others. Be careful in teaching the application of the terms *possessive* and *appositive*. Teach that possessives and appositives are usually nouns or pronouns, although they are used like adjectives as modifiers of nouns. The rules for the formation of the possessive case should be

learned, but no attempt made to develop the idea of *case*. Use sentences written by pupils as supplementary exercises in analysis and parsing.

Kinds of Pronouns: 1. *Personal Pronouns*.—Be careful to teach the subject of *person* before attempting to teach the definition of the term *personal pronoun*. The exercises on page 49 are specially important, and none of them should be omitted.

2. *Possessive Pronouns*.—Do not fail to make the pupil understand that a *possessive* denotes a possessor only, while a *possessive pronoun* denotes both the *possessor* and the *thing possessed*.

3. *Relative Pronouns*.—Develop the idea of a *relative clause* by the use of oral illustrations. Supplement the exercises on pages 54 and 55 by sentences prepared by teacher or pupil.

4. *Interrogative Pronouns*.—As additional exercises in analysis and parsing, use sentences written by pupils. These sentences should contain both interrogative pronouns and interrogative adjectives.

The Adverb.—Do not omit any of the exercises on page 58. In developing the idea of the adverb, as well as that of the adverbial element, use oral illustrations. Require pupils to substitute adverbs for the adverbial clauses, when practicable, in the exercises on page 60.

The Preposition.—Require pupils to point out the groups of words used as modifiers in the exercises on page 63; then teach them that each group begins with a word that shows the relation between the words it connects. Call this connective a *Preposition*, and the modifying group of words a *Phrase*. The definitions of the two terms may then be learned and the exercises analyzed.

The Infinitive.—Pupils should be made to understand the difference between *expressing* action and *affirming* it before being permitted to commit the definition of the infinitive to memory. Use oral exercises to supplement those given on page 66.

The Conjunction.—The definition should be taught in the manner indicated in the oral lesson on page 67. Show by illustrative examples in what respects conjunctions differ from prepositions and relative pronouns.

Compound Elements.—Require pupils to commit to memory the directions for writing compound elements. Use sentences written by pupils as exercises in analysis.

Simple and Compound Sentences.—Require pupils to write sentences, each containing a part common to the others, and then to combine them into single sentences; also, to write many compound sentences, and, when possible, to separate them into simple ones.

Complex Sentences.—Call attention to the remarks on page 74, and teach that a sentence in which a clause is used as subject or predicate, is complex, one of its elements containing a subject and a predicate. Use many sentences, in addition to those on pages 76 and 77, as exercises in reducing and enlarging sentences.

Review.—Review Part I thoroughly before beginning Part II. In this review, sentence-making and composition should not be neglected. They are more important exercises than analysis and parsing.

PART II.—ADVANCED COURSE.

Gender, Person, and Number.—Use oral illustrations in teaching the definitions, and use the sentences required

to be written as exercises in analysis. As soon as the idea of a property is developed and the definition learned, require the term to be used in parsing exercises. Do not require the rules for the formation of the plurals of nouns to be committed to memory and recited in the order in which they are arranged in the text, but let pupils refer to them until they can write correctly the singular and plural forms of nouns in common use.

Case.—Use the illustrations on page 83 in showing that the term *case* is used to denote the *relation* of a noun or a pronoun to other words, and oral illustrations in showing the use of the same term to denote the *form* of a noun or pronoun. Call attention to the fact that nouns have only two case-forms,—the nominative and the possessive,—the nominative case-form being used in the nominative, objective, and nominative-absolute cases. Review the lesson on pages 43 and 44 thoroughly, and require pupils to write a large number of sentences containing nouns in the possessive case singular and plural.

Properties of the Pronoun: 1. *Personal Pronouns.*—Refer to the remarks on page 89 occasionally in parsing exercises, and require pupils to state the substance of each remark in their own language.

2. *Possessive Pronouns.*—Teach that in parsing a possessive pronoun by the first method, no attention whatever should be paid to the name of the possessor, the part to be parsed being the name of the thing possessed. This part may be in any case except the possessive. Teach, also, that in using the second method, one of the two words into which the pronoun may be separated, may be *owning*, *having*, or *possession*.

3. *Relative Pronouns.*—Teach orally how to distinguish a relative from a personal pronoun. Be patient, and do

not hurry in this part of the course. Each paragraph following the description of "double relatives" on page 93 may be made the subject of a separate lesson.

4. *Interrogative Pronouns*.—Require the remark on page 95 to be studied carefully, and be sure that the pupils understand the meaning and use of the term *subsequent*. In review lessons, show how interrogative pronouns are used in indirect questions.

False Syntax.—Do not require the "Cautions" to be learned in teaching pupils how to correct examples in false syntax. Refer to them as occasion may require.

The Adjective.—Review definitions already learned. Teach that *more*, *most*, *less*, and *least*, in such expressions as *more careful*, *most careful*, *less careful*, and *least careful*, are adverbs. The lists of pronominals need not be committed to memory, and no technical terms should be employed in parsing, except those given in the "Order of Parsing."

Properties of the Verb.—Review as directed on page 103.

1. *Voice*.—Require the verbs in given sentences to be changed from the active to the passive voice, or from the passive to the active voice. At first, let the pupils point out the parts of each verb in the passive voice.

2. *Mode and Tense*.—Having taught the definition of the indicative mode, teach the subject of Tense. Do not assign long lessons. To teach a single mode thoroughly may require all the time usually set apart for several recitations.

3. *Number and Person*.—Refer to Rules XIII, XIV, and XV as occasion may require.

4. *Conjugation*.—The paradigms need not be committed to memory; but pupils should prepare synopses

and write sentences containing verbs in any required form, voice, mode, tense, number, and person.

The Adverb.—Review the lessons on pages 57, 58, 59, and 60. Do not require pupils, in parsing exercises, to tell to what class an adverb belongs.

The Preposition.—Require the statements made on page 127 to be studied carefully. Let the pupils state the substance of each paragraph in his own language. In written exercises in analysis and in diagrams, use the symbol [] to indicate the omission of a preposition.

The Conjunction.—Review the lesson on page 67, and teach the definition on page 129; then review pages 68, 69, 70, 71, 72, 73, 74, 75, 76, and 77.

Ellipsis.—Let the pupils supply the words omitted in their reading lessons and in sentences used as drill exercises. Write on the blackboard a series of elliptical sentences to show that any part of a sentence may be omitted except the part that will suggest the rest.

Abridgment.—Require pupils to change many complex sentences to simple ones by abridging their subordinate clauses; also, to write sentences containing abridged propositions. Let the pupils state in their own language the substance of the three parts of the remark on page 134. Refer to this remark in parsing the nouns or the pronouns in abridged propositions. Teach that the noun or the pronoun on which an infinitive depends is called the subject of that infinitive.

XV.

HARVEY'S REVISED PRACTICAL GRAMMAR.

GENERAL REMARKS.—In Harvey's Elementary Grammar and Composition, the arrangement of the topics relating to technical grammar and analysis corresponds to the order in which they should be studied by beginners. In his Practical Grammar, the topics are arranged in a different manner—those relating to the same subject or division of a subject being grouped together.

In many schools, the Practical Grammar is used in teaching classes of beginners. To secure the best results in such schools, the topics properly belonging to an elementary course of instruction should be studied in an order similar to that indicated in this manual. Having mastered this course, pupils can pursue, easily and profitably, the study of those more difficult topics usually regarded as belonging to an advanced course.

In mastering this elementary course, pupils will learn (1) to identify words as belonging to certain classes, called parts of speech; (2) to analyze sentences, or to separate them into their principal and subordinate elements; (3) to define the technical terms employed, and to use them intelligently; (4) to express thoughts in properly constructed sentences; (5) the correct use of capital letters, marks of punctuation, etc.

In teaching classes of beginners, omit the definitions on page 7 and all of Part I. When necessary in sen-

tence-making and composition, refer to the rules and remarks on the use of capitals, small capitals, etc., in Part I, but do not require pupils to commit them to memory.

In an advanced course, reference should be made to Part I for definitions of terms used in orthography, and it may be advisable to have occasional drill exercises in the analysis of syllables and words; but systematic instruction in orthography need not be made a part of the course.

The "Cautions" should be studied carefully, and pupils required to correct the examples in false syntax. Frequent reference should be made to these cautions in correcting the spoken and written language of pupils. It is by no means necessary that they be learned and recited memoriter.

In assigning lessons, the teacher should designate the "Remarks" to be studied, and refer to them frequently in conducting recitations. Pupils may occasionally be required to state in their own language the substance of remarks assigned as a part of a lesson.

The "Rules" may be learned when they are needed in parsing exercises. In some instances, the whole or a part of a remark may be used instead of a rule—as in parsing a noun or a pronoun changed from the nominative to the objective case in abridging a proposition, or a noun or a pronoun in the nominative case after a participial noun in an abridged proposition. (See Remark 3, page 198, and the second part of Remark 1, page 182.)

In all written exercises, require pupils to observe the rules for the use of the marks of punctuation. In drill exercises in punctuation, use the methods recommended

in the "Note to Teachers" on page 252. The exercises in the text-books should be studied until the application of each rule and remark is understood.

The subjects under the heading of "Figures of Language" may be referred to for the definitions of such technical terms as pupils may have occasion to use in literary exercises. Refer to these terms and their definitions when appropriate illustrations occur in reading lessons.

At least one third of the time usually set apart for recitation should be spent in sentence-making and composition. It is to be regretted that in many schools no attention whatever is paid to these important exercises.

Pupils must know how to analyze a given sentence before they can intelligently represent its analysis in a diagram. The proper use of diagrams, therefore, is to supplement oral or written analysis.

As a rule, pupils should not begin the study of technical grammar before they are ten years old.

ELEMENTARY COURSE.

(The references are to Harvey's Revised Practical Grammar.)

The Noun: definition.—Page 7. In teaching the definition, use the first paragraph of the oral lesson on page 29.

Analysis: definitions.—Lesson I, page 136. Do not require or permit pupils to commit the definitions to memory before they have learned the uses of the terms to be defined. Do not omit any of the exercises in sentence-making on page 137. Rule I, page 245, to be observed in writing.

Analysis.—Lesson II, page 137.

The Noun.—Use the second and third paragraphs of the oral lesson on page 29 in teaching the *Common Noun* and the *Proper Noun*. Require pupils to point out the nouns in their reading lessons, and to tell whether they are common or proper.

Model for Parsing.—"John is an orphan." *John* is a *noun*: it is a name; *proper*: it is the name of a particular person. *Orphan* is a *noun*; (why?) *common*: it can be applied to any one of a class or kind.

Analysis.—Lesson III, page 138, and the classification of sentences with respect to use on page 144.

The Adjective.—Use the first four paragraphs of the oral lesson on page 42 in teaching the definition. Do not omit any of the exercises on page 26.

The Adjective.—Use the last three paragraphs of the oral lesson on page 43 in teaching the definitions of the two kinds of adjectives. Require the pupils to classify the adjectives as descriptive or definitive in the exercises on page 26.

Model for Parsing.—"Ripe apples are in that box." *Ripe* is an *adjective*: it is a word used to describe a noun; *descriptive*: it describes a noun by denoting some quality. *That* is an *adjective*; (why?) *definitive*: it defines without expressing any quality.

The Pronoun.—Use the first paragraph of the oral lesson on page 56 in teaching the definition. Require pupils to point out the pronouns in the exercises on page 26 and in their reading lessons.

Model for Parsing.—"Who came with you?" *Who* is a *pronoun*; it is a word used instead of a noun. *You* is a *pronoun*; (why?).

Analysis.—Lesson IV, page 138. Analyze all the ex-

ercises, and require pupils to point out and classify all the nouns and adjectives. Use these diagrams:

1. *Apples are ripe.*

Apples | are : ripe.
|

2. *Birds fly.*

Birds | fly.
|

The Verb.—Teach the definition in the manner indicated on page 26, and in the first paragraph of the oral lesson on page 73. Require pupils to write sentences containing verbs denoting action.

Analysis.—Lesson V, page 139. Use this diagram:

Children love play.

Children | love | play.
|

The Verb.—Use the last three paragraphs of the oral lesson on page 73 in teaching the definitions of the three kinds of verbs. Use oral exercises in drills on the application of the terms *transitive*, *intransitive*, and *copulative*.

Models for Parsing.—1. “Pupils recite lessons.” *Recite* is a *verb*; it denotes action; *transitive*: it requires an object to complete its meaning. 2. “The horse runs.” *Runs* is a *verb*; (why?) *intransitive*: it does not require the addition of an object to complete its meaning. 3. “Liberty is sweet.” *Is* is a *verb*; (why?) *copulative*: it is used to connect a subject and a predicate, and to make an assertion.

Analysis.—Lesson VI, page 140. Do not omit any of the exercises in sentence-making. Use sentences written by pupils as additional exercises in analysis. Require pupils to point out the nouns, pronouns, and

adjectives in all the exercises. *Be patient, and do not hurry.* Use these diagrams:

- 1.
- Cold winter comes.*

winter		comes.
Cold		

- 2.
- The man reads his paper.*

man		reads		paper.
The				his

The Participle.—Teach the definition in the manner indicated on page 27. Call attention to the difference between a participle and a verb.

Teach the classification and definitions as given on pages 78 and 79. Require pupils to point out and classify the participles in the exercises on pages 81 and 82. Use the model for parsing on page 81.

Analysis.—Lesson VII, page 141. Teach orally the use and the definition of the term *subordinate element*. Use these diagrams:

- 1.
- The wind blows violently.*

wind		blows
The		violently.

- 2.
- Very loud reports were heard.*

reports		were heard.
loud		
Very		

The Adverb.—Use the oral lesson on page 115 in teaching the definition.

Model for Parsing.—"He acted wisely." *Wisely* is an *adverb*; it is used to modify a verb.

The Phrase.—Teach the use of a prepositional phrase, calling it a "group of words." Let pupils point out the phrases in the exercises following the definition of the preposition on page 28. Use this diagram:

The weary soldiers rested at noon by the roadside.

soldiers		rested
weary		at noon
The		by roadside.
		the

The Preposition.—Use the oral lesson on page 121 in teaching the definition. Define the term *phrase* (see page 162).

Model for Parsing.—"The horse ran over the hill." *Over* is a *preposition*; it shows the relation between its object and some other word: it shows the relation between *hill* and *ran*.

Analysis.—Teach the definition of the term *simple sentence* given on page 145. Use sentences written by pupils as drill exercises in analysis. Many of these sentences should contain phrases used as adjective or adverbial elements.

The Pronoun.—Teach the classification of the pronoun, using the oral lesson on page 56. Illustrate the use of the terms *first person*, *second person*, and *third person* before teaching the classification.

Models for Parsing.—1. "I have seen him." *I* is a *pronoun*; it is a word used instead of a noun: *personal*; it shows by its form that it is of the first person. 2. "That book is *hers*." *Hers* is a *pronoun*; (why?): *possessive*; it represents both the possessor and the thing possessed. 3. "I am he whom ye seek." *Whom* is a *pronoun*; (why?): *relative*; it represents a preceding word to which it joins a limiting clause. 4. "Who goes there?" *Who* is a *pronoun*; (why?): *interrogative*; it is used in asking a question.

Analysis.—Teach the definition of the term *Complex Sentence* given on page 145. Require pupils to point out the principal and subordinate clauses in the exercises. Use the exercises on page 146, and the first six exercises on page 166 as illustrations. Do not analyze the subordinate clause in a complex sentence, but teach its use as an element. Require pupils to write many

sentences containing subordinate clauses. Analyze these sentences, using these diagrams:

1. *He who studies will learn.*

He	will learn.
who studies	
2. *Flowers will bloom when spring comes.*

Flowers	will bloom
	when spring comes.

The Conjunction.—Use the oral lesson on page 127, and the exercises on page 29. Teach the uses and the definitions of the two kinds of conjunctions.

Model for Parsing.—"Eli and Silas will improve if they study." *And* is a *conjunction*; it is a word used to connect words: it connects the words *Eli* and *Silas*. *If* is a *conjunction*; it is a word used to connect clauses: it connects the clauses *Eli and Silas will improve* and *they study*.

Analysis.—Teach the definition of the term *simple element* given on page 168. Use any appropriate exercises in preceding lessons as illustrations.

Analysis.—Teach the definition of the term *compound element*, using exercises on page 174. Use these diagrams:

1. *John and Seth read well.*

John and Seth	read
	well.
2. *They run swiftly and gracefully.*

They	run
	swiftly and gracefully.

Analysis.—Teach the definition of the term *Compound Sentence* given on page 146, using oral exercises. In analysis, use this diagram:

Talent is something, but tact is every thing.

Talent	is : something,	<i>but</i>	tact	is : thing.
				every

The Interjection.—In analyzing a sentence containing an interjection or any attendant element, use this diagram:

Hark! some one comes.

Hark!

one	comes.
some	

Review.—Review thoroughly the instruction given in this course, requiring pupils to prepare most of the exercises used in analysis and parsing.

ADVANCED COURSE.

The Noun.—Review the definitions already learned, and teach the use and definition of the term *participial noun*. Show by illustrative examples that the words *the, this, that, these, those*, etc., give a particular meaning to common nouns when placed before them, but do not convert them into proper nouns; as in the sentence, “*The horse is in that stable.*” Do not require pupils to commit any of the remarks to memory, but refer to them when necessary in assigning lessons or conducting recitations.

Properties of Nouns: 1. *Gender.*—Refer to the remark following the definition, and to other remarks as occasion may require.

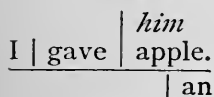
2. *Person.*—Note particularly Remark 2.

3. *Number.*—Write on the blackboard lists of nouns in the singular number, and require pupils to write their plural forms on slate or paper. The rules for the formation of the plural of nouns can be learned much more

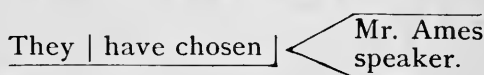
easily by writing well-selected illustrations than in any other way. Require pupils to write the singular and plural forms of nouns found in reading lessons; also, the plurals of the names of common objects.

4. *Case*.—Show that the term *case* denotes (1) the *relation* of a noun or a pronoun to other words, and (2) the *form* of a noun or a pronoun. Require pupils to write the possessive singular and possessive plural of nouns, referring to the remarks when necessary. Do not neglect to teach the meaning and use of the terms *direct object* and *indirect object* (see page 38, Section 32, Remark). Teach, also, that in the cases referred to in Remark 3, page 154, the object denoting rank, office, occupation, character, or species may be called an *Attributive Object*. Use these diagrams:

1. *I gave him an apple.*

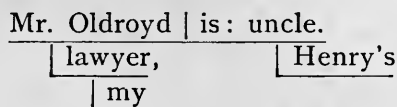


2. *They have chosen Mr. Ames speaker.*



In showing that nouns and pronouns in the possessive case or in apposition are adjective elements, use this diagram:

Mr. Oldroyd, my lawyer, is Henry's uncle.



The Adjective.—Review definitions already learned. Teach the definitions of the three kinds of pronominal adjectives, but do not require pupils to commit the lists to memory. Refer to the words in these lists in

parsing and composition exercises, and in correcting false syntax. The adverbs *more*, *most*, *less*, and *least*, when used in the comparison of adjectives, may be regarded as adverbial elements. Do not neglect to teach the correct use of the pronominals.

The Pronoun: 1. Personal Pronouns.—Show that the term *case* denotes the form of a personal pronoun as well as its relation to other words, and that it may be used to denote the form only;—as *its*, when not used in connection with other words in a sentence, is a personal pronoun in the possessive case; and *him*, when used in a similar manner, a personal pronoun in the objective case. Teach that *it*, when used to introduce a sentence in a peculiar way, may be called an *apparent subject*, because it requires the verb following it to be in the third person and singular number, although the *real subject*, which is placed after the predicate, may denote plurality; as, “*It was pleasant to see the man and to hear him talk.*” Refer frequently to the remarks on pages 59, 60, 202, and 203.

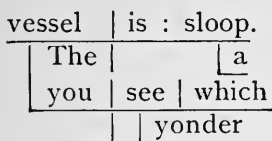
2. *Possessive Pronouns.*—Point out the difference between a possessive pronoun and a personal pronoun in the possessive case. Show that the former represents the possessor and the thing possessed, while the latter represents the possessor only. Teach that in parsing a possessive pronoun by the first method, the name of the thing possessed is the part considered, and that no attention whatever is paid to the name of the possessor; also, that in using the second method, *owning*, *having*, or *possession* may be one of the two words into which a possessive pronoun may be separated.

3. *Relative Pronouns.*—Ascertain that the pupils know how to distinguish a relative from a personal pronoun.

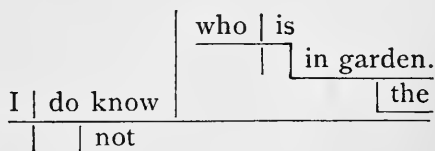
Show why a relative pronoun is never found in a principal clause. Refer to the remarks on pages 65, 66, and 202 in parsing compound relatives and the words *what* and *that*. In analyzing, refer to remarks on page 176.

4. *Interrogative Pronouns*.—Require pupils to study Remark 1, Rule IX. Teach the use of the interrogative pronouns in indirect questions used as objective elements. Use the following diagrams in analyzing sentences containing relative or interrogative subordinate clauses:

1. *The vessel which you see yonder is a sloop.*



2. *I do not know who is in the garden.*



The Verb: 1. *Classes with respect to use*.—Review definitions of these classes. Teach pupils how to ascertain from its meaning and use, or by referring to a dictionary, whether a verb in a given sentence is transitive, intransitive, or copulative. In class drills, use the exercises following the remarks.

2. *Classes with respect to form*.—Teach that when the sound represented by the vowel or digraph in the simple form of the verb is changed in the past indicative and perfect participle, the verb is irregular; as, *hear* is an irregular verb, because the sound of the vocal element in the simple form is changed in *heard*, the past indicative and perfect participle.

Properties of the Verb: 1. *Voice*.—Require pupils to study carefully the exercises following the remarks.

2. *Mode and Tense*.—Teach the use and definition of the indicative mode; then teach the subject of tense, referring to the remarks for illustrations and explanations. Develop the idea of each mode, and ascertain that all the pupils have a clear conception of it before permitting them to learn the definition. Omit none of the exercises. Teach the form and use of the *strengthened copula*, then analyze the exercises on page 165.

3. *Number and Person*.—Refer to the remarks on page 94, and those under Rules XIII, XIV, and XV, as occasion may require.

Forms.—Pupils should write sentences containing examples of these forms. Special attention should be paid to progressive and passive forms. See that pupils can tell without hesitation which participle is used in each form. Use the sentences written by pupils as exercises in analysis and parsing.

Conjugation.—Pupils need not commit the paradigms to memory, but they should prepare synopses and write sentences, each containing a verb in any required voice, form, mode, tense, number, and person, until they can identify any verbal form at sight, and use it readily in sentence-making and composition. (See “Exercises,” page 106.)

Infinitives.—In teaching the infinitive mode, require the pupils to study the remarks on page 87, and those following Rules XVI and XVII. For models for the analysis of sentences containing infinitives, see pages 164 and 165. The infinitive in a strengthened copula is always an adverbial element modifying the finite verb; but, in analyzing, it is not necessary to separate such a copula into its parts. Use the diagrams at top of next page.

1. *To hear is to obey.*

To hear | is : to obey.

|

2. *James likes to work.*

James | likes | to work.

|

3. *Clarence seems to be busy.*

Clarence | seems to be : busy.

|

4. *That apple is not good to eat.*

apple | is : good

That | not | to eat.

5. *He has wheat to sell.*

He | has | wheat

to sell.

The Adverb.—Require pupils to enlarge sentences by substituting phrases or clauses for adverbs. Although an adverbial phrase may be parsed as a single adverb, it is sometimes advisable to parse each word in such a phrase. (See Remark 9, page 216.) Refer to the “General Remarks” as well as to the “Cautions” in correcting false syntax. In analyzing a sentence containing an adverbial clause, use this diagram:

He defends himself when he is attacked.

He | defends | himself

| | he | is attacked.

| | when

The Preposition.—Remark 5, page 122, and Remark 1, page 200, should be studied very carefully. Use Model XX, page 164, in analyzing a sentence containing a noun or a pronoun in the objective case without a governing word,—also this diagram:

The weary traveler will reach Chicago to-morrow.

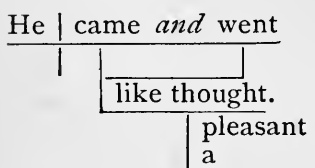
traveler | will reach | Chicago

| weary | [] to-morrow.

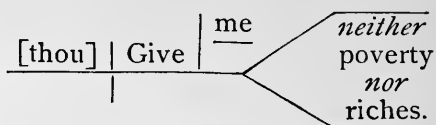
The

The Conjunction.—Do not require pupils to learn the classifications given in the remarks, or to use the terms employed in them in parsing exercises. When necessary, refer to the remarks on pages 219 and 220. Use these diagrams:

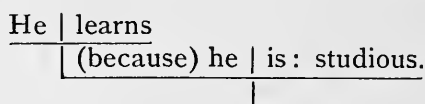
1. *He came and went like a pleasant thought.*



2. *Give me neither poverty nor riches.*

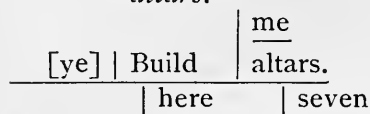


3. *He learns because he is studious.*

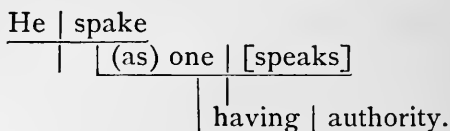


Ellipsis.—Require pupils to supply words omitted in reading lessons and in elliptical sentences selected to be used as drill exercises. Use these diagrams:

1. *Build me here seven altars.*



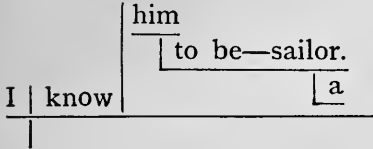
2. *He spake as one having authority.*



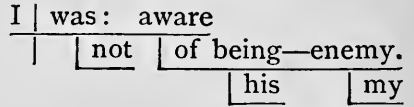
Abridgment.—Require pupils to abridge subordinate clauses, and ascertain that they can always distinguish between abridged propositions and elliptical sentences. They should also be required to state in their own language the substance of the three parts of Remark 1, page 182. Refer to appropriate parts of this remark in

parsing nouns and pronouns in abridged propositions.
Use these diagrams:

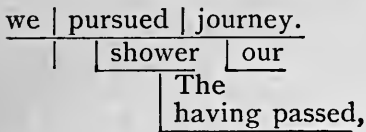
1. *I know him to be a sailor.*



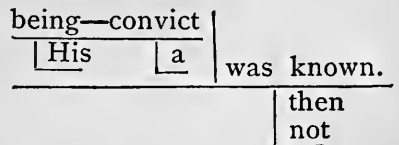
2. *I was not aware of his being my enemy.*



3. *The shower having passed, we pursued our journey.*



4. *His being a convict was not then known.*



A noun or a pronoun on which the infinitive depends in an abridged proposition is called the subject of the infinitive. In parsing it, many prefer to use the following rule: "The subject of an infinitive is in the objective case."

HISTORY

XVI.

THE ECLECTIC HISTORY OF THE UNITED STATES.

IT is much to be regretted that the study of history, which can be made so interesting, should so often prove unprofitable drudgery; and that children, with a natural love of narrative, should become so thoroughly disgusted with the subject as to retain, as long as they live, a dislike for historical reading.

In the vast majority of cases, these unhappy results are due entirely, or in large part, to bad methods of teaching. To attain the best possible results, three things are essential:

1. The teacher must be properly prepared to handle the subject.
2. He must take into careful consideration the age and capabilities of his pupils, the resources of the neighborhood, and the time he is able to give, in connection with other branches, to this subject.
3. He must adopt a method in conformity to these conditions, and must plan his work carefully in advance in accordance with this method.

The Teacher's Preparation.—There are few teachers, perhaps, in our common schools, who have made a specialty of the study of history, and yet the limited resources of the ordinary country school and neighborhood in the way of books of reference, demand that the teacher be thoroughly well-read in the history of the United States in order to supply as far as possible

this deficiency. We do not mean to imply that a teacher must be a student of history in the way of making original research,—although this kind of work would certainly add to his usefulness as a teacher, and, as is elsewhere suggested, should by all means be engaged in so far as *local* history is concerned,—but we do mean to say, that, if a teacher wishes to make his instruction in history interesting and profitable, he must give the subject more than casual attention, and must not limit his class to any text-book on the subject. In many cases, the children's only source of information will be the text-book. The teacher, therefore, must store his mind with historical events, incidents, and anecdotes not to be found in the ordinary text-book, and be able to present them to his class in a manner so interesting as to create a taste for the study of historical literature.

It will readily be understood that a text-book of history must necessarily use the fewest words that will serve to give an *outline* of great events, and must therefore leave out many incidents of the liveliest interest, but of no great historical importance. These incidents, however, are to the text what the juice is to an orange, and a large supply of them should be at the command of every teacher who aims to do valuable work in this field of study. This necessitates reading, on the part of the teacher, of some of the standard authorities, such as Bancroft, Hildreth, etc., and the wider the range of his reading the better. A very full list of such works may be made from the references at the close of chapters in the *Eclectic History of the United States*. It is not supposed that all the works mentioned can be obtained and read by every teacher of history, but a very full list is given with the expectation that at least some

of the books will be within the reach of every teacher, and that he will consult as many of them as time and circumstances will permit.

Again, it is not supposed that a teacher will endeavor to impart all the information he gains in this way to his class. The teacher is, on the contrary, called upon to exercise the most careful judgment as to when to confine himself to the text-book and when to add to the information it presents. The facts of history are not all of the same value. Certain great events stand out in bold relief, giving form and shape to the whole. It is these great events that should be dwelt upon and emphasized, and impressed upon the minds of the pupils. To do this, the teacher must make them interesting by attractive and forcible narration, and must present them again and again in different lights as viewed by different authors.

Sometimes the teacher will need to illustrate the general condition or state of a certain period by particular instances. Again, he will wish to emphasize some great character, such as Washington, Hamilton, or Lincoln, by striking passages from other histories or biographies. Or the attention of the class must be directed particularly to some important battle or some great principle. It will be seen that this kind of work demands thorough knowledge of the subject, sound judgment, and a careful planning of work before teaching is commenced.

Restricting Conditions.—The principal obstacles encountered by an enthusiastic teacher of history in country district schools, are the limited time usually allotted to the study and the meager resources of the neighborhood in books of reference. In many schools, history

is crowded into one or two terms, and a year at the utmost is considered a full allowance. We would urge, if it can possibly be managed, that *at least two years* be given to the subject, as, in our opinion, that amount of time is necessary in order to obtain the best results. Two or three recitations a week, for two years, will be found preferable to a daily recitation for one year. The former plan gives both teacher and pupil the requisite time for outside reading and the proper preparation of the lesson. Each teacher, however, must be his own judge as to whether this plan is practicable in his particular school, and must modify his method of teaching accordingly.

Where the locality is without books to which the children can be referred, the teacher must exert himself to supply as much extra valuable and interesting information as possible from his own store of knowledge. The difficulty of obtaining this kind of information is fully appreciated, and much valuable and interesting detail,—which hardly has a place in the text proper, but which could not be obtained by pupils without a larger library of reference than most neighborhoods afford,—has therefore been condensed in the notes of the Eclectic History. But the teacher should not depend upon these notes alone. He should bear in mind the fact that the more reading he does, and the greater variety of little incidents and fresh facts he can tell the class, the more life and interest will he infuse into the recitations.

The restrictions of age and capability are also important. The teacher must be warned against treating the subject in such a way as to discourage pupils by presenting difficulties too great for their minds to grasp. Pupils should certainly be incited to effort, but it is best

to keep well within the limits of their understanding and capacities, especially in the early part of the course.

While the limitations of the ordinary district school are thoroughly comprehended, it is of the utmost importance that the aims of the teacher should be high; we therefore make the following suggestions as to the method of teaching on the supposition that the time necessary for effective work *will* be taken, and that the teacher *will* exert himself to secure the requisite books of reference for his pupils. If this can not be done in all cases, at least the teacher can approach as near as possible to what he knows to be the correct method of teaching.

As has been remarked in regard to other studies, it is not claimed that the method here advised is the *only* correct method of teaching the history of the United States, but it is the one urged because it is believed to be the most profitable and the most interesting method to pupils.

Methods of Teaching.—In selecting a method of teaching history, one must consider not only the capabilities of pupils and the resources available, but also the objects to be accomplished, and how he can best accomplish them.

The primary object in teaching this subject, as usually and perhaps fairly considered, is to give the pupil a clear and tolerably comprehensive view of the history of the United States from the earliest records to the present day. But there is a secondary object of but little, if any, less importance, which should be kept constantly in view, and which should modify very largely the means to be adopted in attaining the first object.

This secondary object, which is by many high authorities considered the primary one in importance, is to arouse in the pupils a love and an enthusiasm for the study, which they will carry with them into after life, and which will give a most valuable bent to their future individual study and reading.

The teacher who simply takes any given text-book, and gives out lesson after lesson, from page to page, or from such a paragraph to such a paragraph, and requires the pupil to repeat the words of the book, or even the ideas of the book in his own words, *limiting his instruction merely to this*, is teaching a book; he is not teaching the history of the United States in a way that will be in the least likely to prove either interesting or of any lasting benefit to his pupils. To be sure, this is the easiest method for the teacher, but it is also a method that means sure death to all interest on the part of both teacher and pupil. It may properly be called the text-book method, and usually consists in cramming the children with what must be to them a mere mass of dry-as-dust statements of events, facts, and dates, strung along in chronological order, with the dead-level monotony of balls on a numeral frame. This method *may* teach children history; it *certainly* will teach them to dislike it, and will unavoidably prejudice them against all historical reading forever after.

The text-book method is probably the most common of all bad methods; but, on the other hand, it would be just as absurd and profitless to go to the opposite extreme, and treat children twelve to fifteen years of age as though they were college students; that is, discarding the text-book altogether, to attempt to teach by lectures alone, requiring the children to take notes, and hand in

written themes on topics clearly beyond their comprehension, such as "The Protective Tariff," "The Monroe Doctrine," etc.

In Germany, history is taught more successfully, perhaps, than in any other country in the world, and while the German method, pure and simple, is entirely inapplicable to the common schools of America as at present conducted, yet it is so thorough and rational that we give a brief account of it, intending to refer to it in the method we shall suggest for adoption.

In Germany, the teacher of primary history is prepared for his work by a special course of study, and confines his teaching to this one branch of education. He has a most thorough knowledge of his subject, and is an expert teller of stories. The children are started in their historical course at nine or ten years of age, and the first two years are employed with biographical sketches of prominent historical characters, presented in the form of interesting and impressive stories, to which the children listen with absorbed attention. This course covers the ground of universal history. The next three or four years, the children are taken over the same ground, but from a different point of view: they now listen to the description of events, and have their attention directed to the causes, purposes, and results of historical movements. The children are now fifteen or sixteen years of age, and have completed two distinct views of universal history. It will be noticed that thus far the children have simply listened—the teacher has done all the talking. This method is based upon the idea that children up to this age are incapable of the unremitting application necessary to the profitable study of a text-book; while, on the other hand, they are per-

fectly capable of acquiring the information imparted by the teacher in the form of entertaining stories. It is held that this method is a true economy of time, and that by its use children are thoroughly interested instead of being worn out and discouraged.

After completing the two courses of lectures described, the pupils take up some special topic or period,—perhaps the history of their own country,—on which they spend three or four years of study, and are then ready for the higher and more philosophical course of the university.*

American teachers, however, must adapt their methods to the requirements of American schools, and though the German method is admirable in its results, it is unfortunately beyond our reach at present. While neither the text-book method, the college method, nor the German method should be attempted in our common schools, yet it is believed that, by a judicious combination of certain features of each of these methods, the very best results possible may be obtained, taking into consideration the restrictions of our schools.

The text-book is without doubt indispensable. It should be used, however, simply as the *outline* of the great picture, which must be filled in and colored by both pupil and teacher. Children should be encouraged to consult as many books as possible, and thus be freed from the idea that history is a *book*, or that it is the

*For a full exposition of the German method, and for much valuable information on methods of teaching history, especially in advanced schools and colleges, the teacher is referred to "Methods of Teaching and Studying History," published by Ginn, Heath & Co.

product or summary of any one person's thoughts and opinions. At the same time, the text-book must be used very largely as a guide. If properly compiled, as in the case of the Eclectic History, it will show at a glance the relative importance of characters and events, and will thus indicate the features which demand especial attention. The danger is, not that the text-book will be used too little, but that it will be used improperly.

The German idea of imparting information to young children by means of interesting stories is extremely valuable, and this plan should be followed to the utmost possible limit. It is at this point that the ordinary teacher in American common schools is particularly weak. As before stated, the teacher is called on to exercise good judgment in selecting his material. He should make a careful study of the entire subject, and, viewing the field as a whole, grade the various events in the order of their importance. Those of the first rank must, of course, receive the greatest amount of attention in the way of extraneous information. The teacher should strive to make his lectures, or rather his *stories*, as interesting as possible from the child's point of view, and must never forget that it is to children, and not to adults of mature mind, that he is addressing himself.

The college method, as usually followed in our leading institutions of learning, includes, not only lectures by the professor, but also the writing of themes by the students. Different topics are assigned to students for their personal investigation and study, and they are required to draw their own conclusions, after reading various authorities on the subject, and then to present these conclusions in the form of a written theme. Here, again, we receive a hint of practical value. If books

of reference are at all available, it will prove a source of great interest to children to read upon properly selected topics, and to write their discoveries in the form of compositions. This work will not only prove interesting, but it will also serve to fix facts more firmly in the mind than any other method of teaching.

Great care must be taken in assigning these subjects for composition. In the first place, the teacher is necessarily restricted by the resources of the neighborhood in books of reference. In assigning topics for composition work, find out definitely, if you can, just what books on the subject are available, and then direct the children where to look for information. General directions to children to read all they can find about a topic will be of little value. See to it, also, that compositions on historical subjects are in the child's own language. The copying of passages from books, word for word, should not be allowed, except, of course, the perfectly proper use of short quotations, acknowledged as such.

The teacher should review the entire field as he did in selecting material for stories, and should assign only topics of real importance. He should be especially careful, in this part of the work, not to over-estimate the capabilities of pupils, and assign to children topics and the discussion of questions which are food for statesmen's minds. It is eminently proper to direct the attention of children—those who are old enough to study history at all—to causes, purposes, and results, provided the topics under discussion are within their comprehension; but it is absurd to try to make them understand, or to interest them in, grave questions of Political Economy, International Law, and abstruse

points of statesmanship generally. Let them deal in their composition work with the biographies of the most eminent historical characters, and with interesting and important *facts* rather than with theories.

Local History.—Begin your work by awakening a sense of reality in the mind of the pupil, and make him sure that the persons, places, and events of which he reads were as vivid and actual as any that he has seen. The question immediately arises, How is this best accomplished?

It has been well said by an eminent professor, in writing on this subject, that “History, like charity, begins at home;” and certainly local history, which has to do with scenes, and perhaps persons, familiar to the children, possesses a peculiar charm and interest, and imparts to the mind a vivid sense of reality. For this reason, local history should be made the introduction to the general text-book. You thus accustom the child to associate spoken or printed descriptions with actual scenes and events. In other words, the child learns to realize the actual existence in the past of that concerning which he is studying to-day. The habit of viewing history in this light must be formed at the outset, and then interest in the study will be maintained to the close. This is a point of vital importance, and should not be undervalued.

The teacher should make a careful, searching study of all the local history of his neighborhood, township, county and state, as contained in old official documents, private papers, legends, or traditions. Any thing that will throw light on the local history, and at the same time be likely to prove of value or of interest to the class may properly be used, and there is hardly a state

in the Union that is not replete with material of this character.

When you have your material together, arrange it in the form of stories suitable for children. The stories concerning the immediate neighborhood should come first in the order of telling, and, so far as possible, the children should be taken to see all the localities to which your stories refer. If any characters at all prominent in history are associated with your neighborhood, short biographical sketches of these should also be given, and the teacher will probably be able to obtain better material for these sketches in the documents, letters, etc., of the neighborhood than is afforded by any book published. By all means *tell* these stories, rather than read them, if you would make vivid and lasting impressions on the children.

After taking up the text-book, continue to make much of familiar places and natural objects so far as they are mentioned in the history, or can be connected appropriately with the text. The tiny brook that runs through the meadow by the school-house may have a pre-Revolutionary history which will portray vividly to the child's mind the general condition of danger and hardship of that period. The states of the Atlantic coast, "The Dark and Bloody Ground," and "The Territory North-west of the Ohio River," afford the ambitious and energetic teacher an almost inexhaustible field for labor in this direction. This work of original investigation demands both time and trouble, but it is also a kind of work that should possess a strong interest for the teacher himself. If patiently persisted in, it will in the end prove a pleasure rather than a labor; or if a labor, at least one which returns a rich reward.

Maps and Diagrams.—When we consider how much the physical features of a country have to do with its progress, we appreciate how closely geography and history are connected, and how essential a knowledge of the former is to a proper understanding of the latter. A barren and rocky soil, or a richly productive one, determines the pursuits, and in a large measure the character of the inhabitants of different localities. A mountain barrier here and a navigable stream there determine the advance of civilization,—and so on. It is essential, then, to the understanding and interest of the pupils that they should be thoroughly instructed in the geography before undertaking the history of the United States.

But the teacher should go farther than this; he should require that history be studied in direct connection with geography, thus combining events and localities so that one is inevitably associated in the mind with the other; and this method of teaching should be carried throughout the work from beginning to end. With this object in view, the Eclectic History is well supplied with full, accurate maps and diagrams; but no text-book can possibly be made so full in this respect but that a teacher should add maps and diagrams of his own for further and more explicit illustration. Moreover, the children themselves should be called upon to make sketch-maps and diagrams, either on the board or on paper, of the particular locality under study in any given lesson.

Assigning Work for the Class.—In assigning advance work for the class, the teacher should give the pupils all the assistance he can towards making their lessons interesting and profitable. Young children es-

pecially need to be guided into proper channels of thought, reading, and study.

Assign lessons by topics. It is not meant by this that all topics can be finished in one lesson, or that one topic is always sufficient for a lesson. That, of course, depends upon the topic; and one of the chief objects of this method is to lead children to consider the relative importance of topics, which will be impressed upon them by the amount of time and study given to each.

When you assign a lesson in the text-book, always read over the advance with the class, explaining any thing that demands your help, and directing attention to the most important events. Explain *why* these events are important, and direct the thought of the class particularly to causes, purposes, and results of the great events in our history. Use your discretion in assigning certain topics merely as subjects for reading, and others for written work. Some teachers find an advantage in giving extra merit-marks or "honors" for additional items of information brought to the class concerning the characters and events of the lesson. These items will usually be collected from books of reference, but sometimes from unauthentic sources,—newspaper articles or the tales of the village Rip Van Winkle. The teacher should be careful to sift the true from the false in all such contributions; and it will nearly always be advisable to direct children where they can find interesting facts, rather than trust to their blind groping in the dark.

Dates.—While quite a full list of dates is presented in the Eclectic History, the young teacher should be warned against attaching too much importance to chronology. Dates should be viewed in their proper light.

They are simply the mile-stones on the journey of progress; as such they are extremely useful, but they are not of more importance than the surrounding scenery.

Dates should not be taught in a list, in chronological order, as though one event was as important as another. Select ten, fifteen, or twenty of the most important dates in the history—as your judgment dictates—and teach these *thoroughly*. Now, if the text be properly taught, the *relative* times of minor events will be remembered easily, and their dates will group themselves naturally about the prominent or focal dates without much apparent effort of memory. For example, the date of the Declaration of Independence may be taken as one of the focal dates, which must be fixed thoroughly in the mind. If the text be taught as it should be, the pupils will have no difficulty in remembering the relative times of the various events that cluster about this focal date; and there will be no necessity of cramming them with the exact figures of such dates as those of the battle of Bunker Hill and the evacuation of Boston, on the one side, or of the arrival of Lord Howe in New York and the battle of Long Island on the other.

Many schemes have been devised for assisting the mind to recall dates. In our opinion, diagrams made on the blackboard or on paper by the scholars themselves are far better than stereotyped charts. If a blackboard can be permanently spared for the purpose, let it be divided by perpendicular lines into six sections, the extremes to right and left being much broader than the rest, while the fourth and fifth are broader than the second and third. A large sheet of bristol-board or of

paper will answer the purpose if a blackboard is not available, but it, too, should be kept before the eyes of the class for reasons which will shortly appear.

Over the first section, on the left, write:

AMERICA BEFORE 1492.

In the center of this left hand section, leaving margins on four sides, draw a square and write within it:

<p><i>Colony in Greenland, A. D. 985.</i> <i>Visit of Lief to New England,. A. D. 1000.</i> <i>Icelandic Settlements, A. D. 1007.</i></p>

Over the other five sections respectively write the numbers of the centuries, 15, 16, 17, 18, 19, as shown in the diagram on the opposite page. Under these let a pupil note briefly, by the direction of the rest of the class, the most important events and dates of each day's lesson as it is recited. The blank spaces will be a reminder of how much is yet to be learned, while the filling up of the sections will be a record of progress.

The events of the fifteenth century are of course very few, as related to America, and the "DISCOVERY OF AMERICA BY COLUMBUS" should be written as large as its importance demands. This is the focal date of that century, but a few dates may be added, if thought desirable, from Notes 1-4 of Chapter III. If other than the focal dates are thus recorded, the latter should be made prominent by being written larger than the others, by being underscored, or in the best manner that may suggest itself to the teacher.

AMERICA BEFORE 1492.	15	16	17	18	19
<div data-bbox="508 151 624 470"> <i>Colony in Greenland, A. D. 985. Visit of Lief to N. E. A. D. 1000. Icelandic Settlements, A. D. 1007.</i> </div>					

A moment or two will be well spent before each recitation in reviewing from this chart the items, if any, noted on the previous day. At the end of the week, let all the events so far learned be read from the chart, or recited, with their dates, until each of the six main divisions of the book has been thus learned and reviewed chronologically.

Prejudices.—Neither author nor teacher should allow his personal prejudices to appear in his educational work. A text-book is not a brief, nor is a teacher a lawyer employed to argue a case. A properly prepared text-book aims to present facts, not opinions, as exactly as they can be ascertained from the most reliable sources of information. It is the teacher's duty to perform his share of the work in the same impartial spirit. However strong the personal feelings may be in the matters of religion and politics, neither author nor teacher has the right to obtrude such personal feelings in the school-room, where children, whose parents may be of widely different opinions and feelings in such matters, meet for instruction.

The public schools of America should present nothing needlessly offensive to Jew or Gentile, Protestant or Catholic, Republican or Democrat. At the same time, the truths of history should be fearlessly set forth by both author and teacher, regardless of the fact that the truth can not always be universally agreeable. For example, it can not be a source of pride for inhabitants of New England to learn the events of the "Salem witchcraft," or of the persecution of the Quakers and others by their forefathers; nor for Protestants to learn of the persecution of the Catholics in Maryland, nor for Catholics to read of the massacres of the Huguenots. The

results of the battles of Bull Run and Gettysburg can not be equally pleasant reading to one who is prejudiced on either side. But the statement of many such facts is absolutely necessary to history, and it seems almost needless to say that it would be radically wrong to distort or suppress such facts when they have a direct bearing on historical results. All such facts should be stated by both author and teacher fearlessly but impartially.

The author of the *Eclectic History* has taken the greatest pains to make that book absolutely impartial in all statements which necessarily touch upon the religious or political sentiments of its readers. The highest possible compliment that could be paid to the author's discrimination in this respect consists in the fact that the book has been assailed only by fanatics and extremists, and by fanatics and extremists of opposing factions. The teacher is urged to conduct his recitations in the same intelligent and unpartisan spirit. He must not allow himself to be led into a partisan or sectarian discussion by questions which his pupils may sometimes ask. He will often find it necessary to exercise a spirit of liberality and self-control.

The most difficult part of the history of the United States to teach, in this particular, is of course that part which treats of the Civil War, fought to conclusion more than twenty years ago. It is time that the educators of the present day were doing all in their power to allay the bitter feelings aroused in that sad time, and, whether Northerner or Southerner, teach the facts of that war as they are now obtained from the official records of both sides. It is believed that the *Eclectic History* presents these facts as impartially as it is possi-

ble to be done. Teach them as impartially as they are presented. If you are a Northerner, avoid teaching on the assumption that every one who fought on the Southern side was necessarily a scoundrel and a villain. If you are a Southerner, be equally liberal towards the opposing ranks of twenty years ago.

Prejudice nearly always involves the distortion of the truth; therefore, the stronger your feelings are on any subject, the more carefully should you guard against their leading you astray. Especially should this fact be remembered by one whose duty it is to enlighten the minds of coming generations.

XVII.

THE ECLECTIC HISTORY.—THE APPENDIX.

THE Appendix of the Eclectic History of the United States should by no means be neglected; nor should the matter it contains be considered of trivial importance because it is placed in an appendix, and not included in the text proper. It seems necessary to make these remarks, owing to the fact that many teachers are in the habit of paying no attention whatever to an appendix simply because it is an appendix, totally disregarding the possible importance of the information to be derived from its careful study.

The matter in the appendix of the Eclectic History may be used as a basis for two distinct courses of study, embracing information especially valuable to pupils of country schools, from the fact that it is not usually elsewhere accessible to such pupils, while at the same time it is information they certainly should possess. The two courses may be formally divided as follows:

1. The acquisition and transfer of territory, and the growth and development of the United States.
2. The political history and form of government of the United States.

As stated, the matter in the text-book is intended to be used merely as a basis of instruction; it should be supplemented by lectures or talks by the teacher. Both courses of study demand work, however, on the part of the pupils, which it is thought will prove interesting as well as profitable.

ACQUISITION AND TRANSFER OF TERRITORY.—GROWTH AND DEVELOPMENT.

The map following page 360 of the Eclectic History, and the explanations accompanying it, are to be used as a basis for the first part of this course of study. It will be necessary for the teacher to procure, also, a small blackboard, say three or four feet square, on which should be *painted* in white an outline of the United States, including Alaska. The materials for constructing this board and map are probably within reach of every teacher. One or two pine boards, a little black and less white paint, and a few hours' work are all that is required. This *base-map*, as it may be called, which is to be used throughout the course, should show simply the outline of the United States as it exists at present, the principal streams, and the meridians and parallels. The latter will be found very useful aids in locating the different interior boundary lines, which are to be filled in with chalk as occasion demands. The present boundary lines of states should not be *painted* on the base-map, as they would detract from the clearness of the work to be performed.

Having prepared your base-map, proceed to trace the acquisition and transfers of territory of the United States from the Revolution to the present day, using the map in the book as a guide for the interior boundaries. This work requires the greatest care, otherwise serious blunders will be made, and your instruction may do more harm than good.

The first thing to be done is to show the boundaries of the United States as established by the treaty of

Versailles (see Article 309), and the boundaries of the thirteen original states. Have the pupils open their books at page one of the Appendix, and, reading the explanations there, tell you where to draw the outlines of the several states in order. If you can procure colored crayons—two or three colors will be sufficient—it will add materially to the clearness of your map to shade adjoining states in different colors. It will be observed that many of the states extended from the Atlantic coast to the Mississippi River, at this period, while Massachusetts and Connecticut were divided into eastern and western portions, with other states lying between them. The northern and eastern boundary of the present state of Maine was not settled until 1842 (see Article 436), but may be laid down as forming part of the boundary line of the United States at this time. When the map is completed, put the proper title and *date*, 1783, on it, and have the class copy it on bristol-board; or, better still, in a book, and mark it “No. 1.” As will be seen, there is to be a regular series of these maps drawn, and the children should be required to preserve the set in some neat form.

The first change of boundary lines occurred, we find, in 1784, when Virginia ceded her western lands to the United States. This was followed rapidly by similar cessions of other states, until in 1790 the changes became so great that a new map is called for, showing the boundaries at that date. Trace the boundaries for this map as you did those for Map No. 1, requiring the pupils to study the key and give you instructions how to lay the boundaries down. Insert on this map the date of the several cessions, following the map in the book as a guide. Give the map its title, “The United States in

1790," and mark it "**No. 2.**" Have the children copy and preserve this, as before.

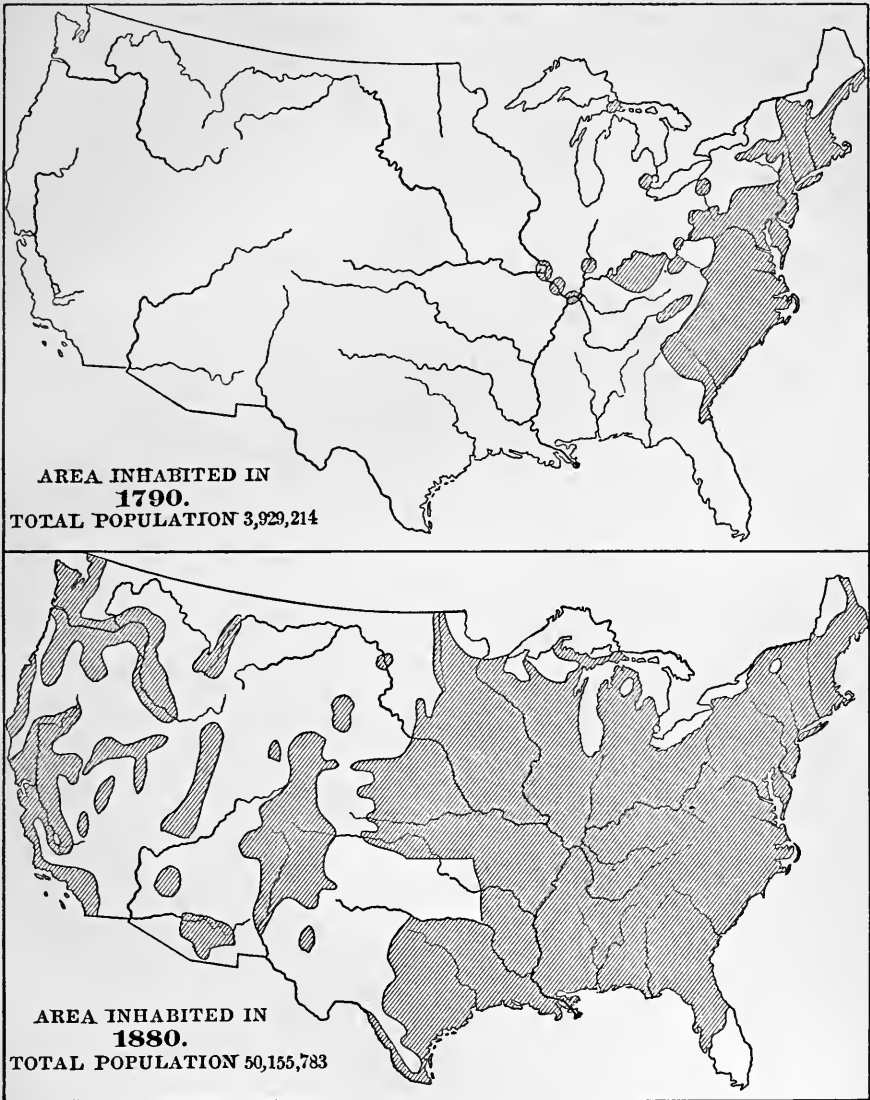
Make a map for every decade, 1800, 1810, etc., and also a map of the country at the time of the several accessions or limitations of territory in 1803, 1819, 1842, 1845, 1846, 1848, 1853, and 1867, marking on each map the changes, with their dates, that have taken place since the date of the map preceding.

As each of these maps is completed, that portion of the text of the Eclectic History which bears directly upon the changes noted should be read over by the pupils with the map before their eyes. Many facts are thus impressively brought out and stamped on the memory. For example, a study of the map of 1820 will at once show the importance of the contest over the admission of Missouri, etc.

When these maps are completed, each pupil will have a valuable portfolio showing the gradual territorial development of the United States. Moreover, they will have a knowledge of the subject which they could gain probably in no other way, and which they will always retain.

In addition to showing the territorial development of the United States, the base-map can also be used to do excellent service in showing graphically the growth of the population and the distribution of the various leading mineral and agricultural products of the country.

It is a recognized fact that the graphic method of presenting facts of this nature is immeasurably superior to mere statistics and dry statements. Moreover, the amount of work required from the teacher is merely nominal. For example, the accompanying maps show the areas of the United States in 1790 and 1880, re-



spectively, inhabited by a population of more than one person to the square mile. These two maps show at a glance the tremendous stride of the country, in less than a century, far more forcibly than could be done by any amount of verbal description. It will take the teacher

but a few moments to shade his base-map after these copies, and the children should be required to copy and compare the two maps.

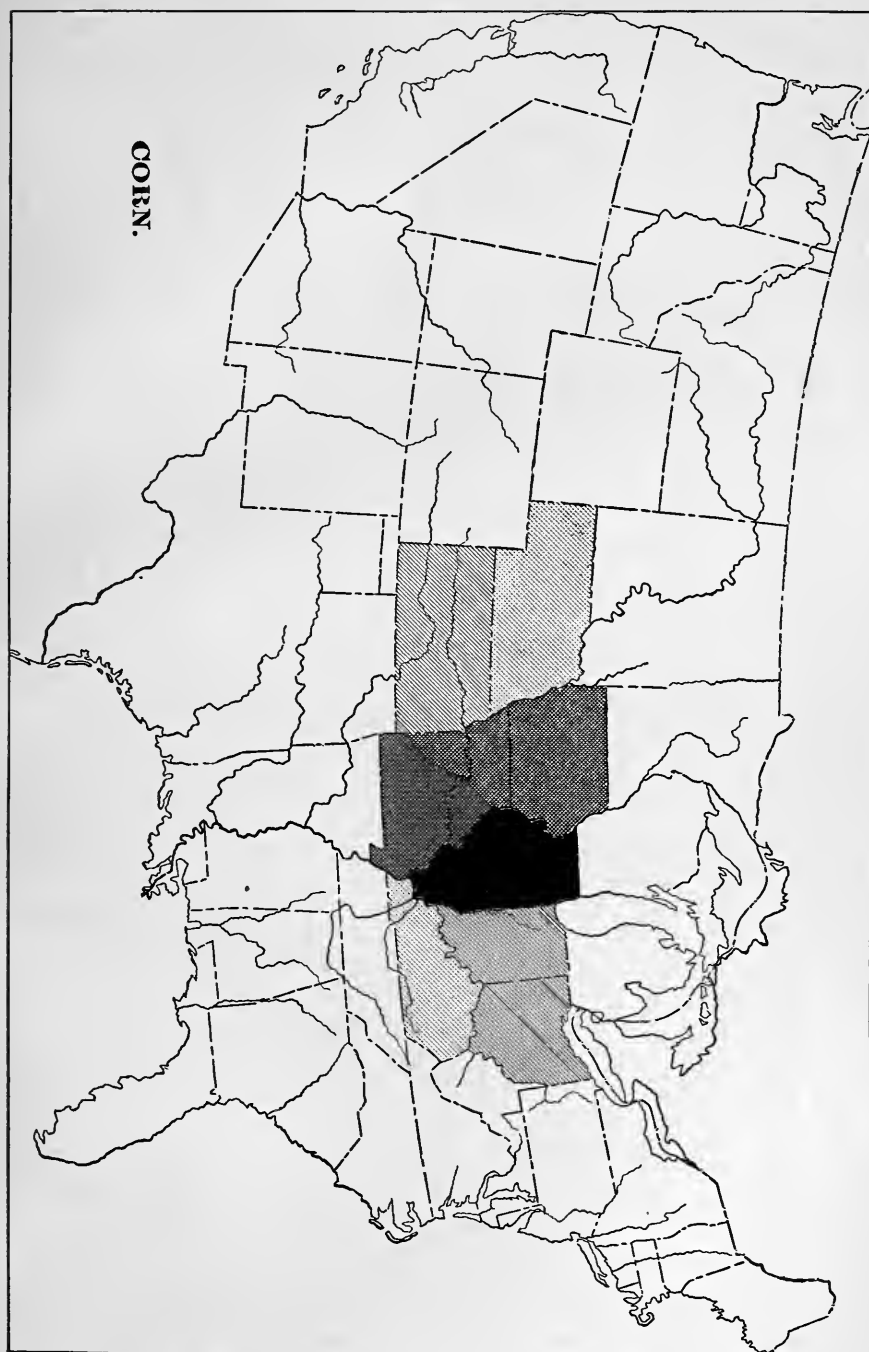
To show how the base-map should be used for displaying the distribution of the agricultural and mineral products of the country, let us take the corn crop, for example. The statistics of the United States Census Report for 1880 give the total corn product of the United States at 1,754,591,676 bushels. Of this amount, eight states produced about 72 per cent, as follows:

CORN.

Total Production, U. S. Census 1880, 1,754,591,676 Bushels.

RANK.	LEADING STATES.	PRODUCTION IN BUSHEL.
1	Illinois	325,792,481
2	Iowa	275,014,247
3	Missouri	202,414,413
4	Indiana	115,482,300
5	Ohio	111,877,124
6	Kansas	105,729,325
7	Kentucky	72,852,263
8	Nebraska	65,450,135
	72 Per Cent.	1,274,612,288

Now shade the states on your base-map, graduating the shading roughly to the production, as in the accompanying map (page 233), and what do we see? The great corn-belt of the United States at once starts forth and impresses itself on the mind as perhaps it never has done before; and we see, also, by a glance at the



map, that the heart of this belt is the heart of the Mississippi Valley.

With a very little expenditure of time or trouble, the teacher can show in a like manner the distribution of the other leading products. For the convenience of teachers the statistics of a number of products are presented below.

The maps of this series should be reproduced by the pupils, each one marked appropriately "Wheat," "Corn," etc., and preserved for reference. If it is thought desirable, pupils can be supplied with the signal service weather maps of the United States. These cost only fifteen to twenty cents a dozen, are easily procured, and answer the purpose capitally. They will save the pupils the labor and time of drawing a complete map of the United States for each product displayed.

WHEAT.

Total Production, U. S. Census 1880, 459,483,137 Bushels.

RANK.	LEADING STATES.	PRODUCTION IN BUSHEL.
1	Illinois	51,110,502
2	Indiana	47,284,853
3	Ohio	46,014,869
4	Michigan	35,532,543
5	Minnesota	34,601,030
6	Iowa	31,154,205
7	California	29,017,707
8	Missouri	24,966,627
9	Wisconsin	24,884,689
	70 Per Cent.	324,567,025

OATS.

Total Production, U. S. Census 1880, 407,858,999 Bushels.

RANK.	LEADING STATES.	PRODUCTION IN BUSHEL.
1	Illinois	63,189,200
2	Iowa	50,610,591
3	New York	37,575,506
4	Pennsylvania	33,841,439
5	Wisconsin	32,905,320
6	Ohio	28,664,505
7	Minnesota	23,382,158
8	Missouri	20,670,958
	71 Per Cent.	290,839,677

BARLEY.

Total Production, U. S. Census 1880, 43,997,495 Bushels.

RANK.	LEADING STATES.	PRODUCTION IN BUSHEL.
1	California	12,463,561
2	New York	7,792,062
3	Wisconsin	5,043,118
4	Iowa	4,022,588
5	Minnesota	2,972,965
6	Nebraska	1,744,686
7	Ohio	1,707,129
8	Illinois	1,229,523
	84 Per Cent.	36,975,632

RYE.

Total Production, U. S. Census 1880, 19,831,595 Bushels.

RANK.	LEADING STATES.	PRODUCTION IN BUSHELS.
1	Pennsylvania . .	3,683,621
2	Illinois	3,121,785
3	New York	2,634,690
4	Wisconsin	2,298,513
5	Iowa	1,518,605
6	New Jersey	949,064
7	Kentucky	668,050
8	Missouri	535,426
	78 Per Cent.	15,409,754

RICE.

Total Production U. S. Census 1880.

RANK.	ONLY STATES PRODUCING.	PRODUCTION IN POUNDS.
1	South Carolina . .	52,077,515
2	Georgia	25,369,687
3	Louisiana	23,188,311
4	North Carolina . .	5,609,191
5	Mississippi	1,718,951
6	Florida	1,294,677
7	Alabama	810,889
8	Texas	62,152
	Total in U. S. . .	110,131,373

BUCKWHEAT.

Total Production, U. S. Census 1880, 11,817,327 Bushels.

RANK.	LEADING STATES.	PRODUCTION IN BUSHEL.
1	New York	4,461,200
2	Pennsylvania . .	3,593,326
3	New Jersey . . .	466,414
	72 Per Cent.	8,520,940

COTTON.

Total Production, U. S. Census 1880, 5,755,359 Bales.

RANK.	LEADING STATES.	PRODUCTION IN BALES.
1	Mississippi	963,111
2	Georgia	814,441
3	Texas	805,284
4	Alabama	699,654
5	Arkansas	608,256
6	South Carolina . .	522,548
7	Louisiana	508,569
8	North Carolina . .	389,598
9	Tennessee	330,621
	98 Per Cent.	5,642,082

HEMP.

Total Production, U. S. Census 1880, 5,025 Tons.

RANK.	LEADING STATE.	PRODUCTION IN TONS.
1	Kentucky, 91 Per Ct.	4,583

SUGAR AND MOLASSES.

*Cane.**Total Production, U. S. Census 1880.*

RANK.	ONLY STATES.	HOGSHEADS OF SUGAR.	GALLONS OF MOLASSES.
1	Louisiana	171,706	11,696,248
2	Texas	4,951	810,605
3	Florida	1,273	1,029,868
4	Georgia	601	1,565,784
5	South Carolina . .	229	138,944
6	Alabama	94	795,199
7	Mississippi	18	536,625
	Total, United States,	178,872	16,573,273

*Sorghum.**Total Production, U. S. Census 1880: Sugar, 12792 Lbs; Molasses, 28,444,202 Galls.*

RANK.	LEADING STATES.	POUNDS OF SUGAR.	GALLONS OF MOLASSES.
1	Missouri	300	4,129,595
2	Tennessee	265	3,776,212
3	Kentucky	554	2,962,965
4	Illinois	1,801	2,265,993
5	Iowa	1,031	2,064,020
6	Indiana	1,141	1,741,853
7	Kansas	805	1,429,476
8	Ohio	270	1,229,852
		6,167	19,599,966

Maple.

Total Production U. S. Census 1880: Sugar, 36,576,061 Lbs.; Molasses, 1,796,048 Galls.

RANK.	LEADING STATES.	POUNDS OF SUGAR.	GALLONS OF MO- LASSES.
1	Vermont	11,261,077	128,091
2	New York	10,693,619	266,390
3	Michigan	3,423,149	131,990
4	Ohio	2,895,782	495,839
5	Pennsylvania . .	2,866,010	140,667
6	New Hampshire .	2,731,945	79,712
		33,871,582	1,242,689

TOBACCO.

Total Production U. S. Census 1880, 472,661,157 Pounds.

RANK.	LEADING STATES.	PRODUCTION IN POUNDS.
1	Kentucky	171,120,784
2	Virginia	79,988,868
3	Pennsylvania . .	36,943,272
4	Ohio	34,735,235
5	Tennessee	29,365,052
6	North Carolina . .	26,986,213
7	Maryland	26,082,147
8	Connecticut . . .	14,044,652
9	Missouri	12,015,657
10	Wisconsin	10,608,423
	93 Per Cent.	441,890,303

FARM PRODUCTS.

Total Production, U. S. Census 1880: Value, \$2,212,540,927.

RANK.	LEADING STATES.	ESTIMATED VALUE OF ALL FARM PRODUCTIONS.
1	Illinois	\$203,980,137
2	New York	178,025,695
3	Ohio	156,777,152
4	Iowa	136,103,473
5	Pennsylvania . .	129,760,476
6	Indiana	114,707,082
7	Missouri	95,912,660
8	Michigan	91,159,858
	50 Per Cent.	\$1,106,426,533

COAL.

Total Production, U. S. Census 1880, 71,067,576 Tons.

RANK.	LEADING STATES.	TONS OF 2,000 POUNDS.
1	Pennsylvania { <i>Anthracite</i> <i>Bituminous</i>	28,640,819 18,425,163
2	Illinois	6,115,377
3	Ohio	6,008,595
4	Maryland	2,228,917
5	West Virginia	1,839,845
6	Iowa	1,461,116
7	Indiana	1,454,327
8	Kentucky	946,288
	94 Per Cent.	67,120,447

PIG IRON.

Total Production, U. S. Geological Survey 1882, 5,178,122 Tons.

RANK.	LEADING STATES.	NET TONS.
1	Pennsylvania . . .	2,449,256
2	Ohio	698,900
3	New York	416,156
4	Illinois	360,407
5	Michigan	210,195
6	New Jersey	176,805
7	Tennessee	137,602
8	Missouri	113,644
9	Alabama	112,765
	90 Per Cent.	4,675,730

GOLD.

Total Production, U. S. Census 1880: Value, \$33,379,663.

RANK.	LEADING STATES AND TER.	VALUE OF PRODUCT.
1	California	\$17,150,941
2	Nevada	4,888,242
3	Dakota	3,305,843
4	Colorado	2,699,898
5	Montana	1,805,767
6	Idaho	1,479,653
7	Oregon	1,097,701
	97 Per Cent.	\$32,428,045

Other gold producing States and Territories, in the order of their productions, are: (8) Utah. (9) Arizona. (10) Washington. (11) North Carolina. (12) Georgia. (13) New Mexico. (14) Wyoming. (15) South Carolina. (16) New Hampshire. (17) Virginia. (18) Alaska. (19) Maine. (20) Tennessee. (21) Alabama.

SILVER.

Total Production, U. S. Census 1880: Value, \$41,110,957.

RANK.	LEADING STATES.	VALUE OF PRODUCT.
1	Colorado	\$16,549,274
2	Nevada	12,430,667
3	Utah	4,743,087
4	Montana	2,905,068
5	Arizona (estimated)	2,325,825
6	California	1,150,887
	97 Per Cent.	\$40,104,808

Other silver producing States and Territories, in the order of their productions are: (7) Idaho. (8) New Mexico. (9) Dakota. (10) Oregon. (11) Michigan. (12) New Hampshire. (13) Maine. (14) Washington. (15) Georgia. (16) North Carolina. (17) South Carolina. (18) Alaska.

MANUFACTURES.

Total Production, U. S. Census 1880: Value, \$5,341,838,890.

RANK.	LEADING STATES.	VALUE OF PRODUCT.
1	New York	\$1,080,696,596
2	Pennsylvania	744,818,445
3	Massachusetts	631,135,284
4	Illinois	414,864,673
5	Ohio	348,298,390
6	New Jersey	254,380,236
7	Connecticut	185,697,211
8	Missouri	165,386,205
	71 Per Cent.	\$3,825,277,040

POLITICAL HISTORY.

Professor Moses Coit Tyler, of Cornell University, says: "I teach American history not so much to make historians as to make citizens and good leaders for the state and nation." This should certainly be the aim, also, of every teacher in our common schools. Every boy in America should learn to appreciate thoroughly American political institutions, and should be so trained that when he grows to manhood he will be able to use his franchise intelligently.

If time admits of a brief course in political history, the teacher should organize the older boys into a class for this purpose. The course need not occupy much time, and will certainly be most valuable. It should consist largely in oral instruction on American institutions, and should treat briefly the following three points:

1. Our form of government compared with others now existing.
2. The origin and growth of our political institutions.
3. The organization and methods of local, state, and national government.

The teacher should describe, in a general way, the various forms of government of the great European powers, and compare them with our own, showing where they are alike, where similar, and where and how they are different. Particular attention should be devoted to the English government, on which our own is so largely based.

The origin and gradual growth of our political institutions should next be traced. The different forms of colonial government should receive brief treatment; the

causes of the Revolution should be reviewed from the Declaration of Independence (page viii of the Appendix); and the changes in local government brought about by the Revolution noted. This should be followed by a short account of the rise and fall of the various political parties since the Revolution, with an outline of their principles.

On taking up the subject of modern political institutions, commence with instruction in regard to the minor political divisions, first of your own state, and then of the United States generally. It will probably prove of interest to pupils to find that there are three distinct classes of these minor divisions which differ essentially in organization; namely, the "town" system, which is confined to New England; the "county" system, which exists in all the southern states—except Virginia and North Carolina—and in Missouri, Nebraska, Nevada, Oregon, and California; and the "compromise," or combined county and township system, which exists in the remaining states of the Union. The compromise system has two forms, very nearly alike, one of which is seen in New York and the other in Pennsylvania. The states adopting this system are quite evenly divided between the two forms.

Mr. S. A. Galpin, writing of these minor divisions for "Walker's Statistical Atlas of the United States," says: "The two which differ most widely from each other, not only in their general characteristics, but also in their location throughout the country, are the 'town' system of New England and the 'county' system of the south. Both of these were firmly rooted in their respective sections before the Declaration of Independence, and passed through the successive transfers of sovereignty

growing out of the war of the Revolution without any material change." *

That system which prevails in your own state should receive full treatment; that is, the class should be instructed as to its minutest details. It will be sufficient to give a simple outline of the other systems, showing their chief points of difference from your own.

Next in order comes the state government, which should also receive full treatment, including a study, or at least a reading, of the state constitution.

Finally, the class should carefully study the constitution of the United States, which is given on pages xi-xx of the Eclectic History, and should be examined thoroughly as to their knowledge of the subject by means of the "Questions" on the two succeeding pages.

* For full and authentic information on these systems, the teacher is referred to the very interesting article, "The Minor Political Divisions of the United States," from which the above is an extract.



PHYSIOLOGY



XVIII.

PHYSIOLOGY.

THE importance of Physiology as a study in the common schools has grown, year by year, until it has attained its proper place, and is now considered a necessary part of education. It is only strange that it has not always been so considered; for health is recognized by all as the prime requisite for a happy life, and we should therefore feel a moral obligation to instruct the young in the fundamental laws of health, and to give them such a knowledge of the human body that they can not violate any of these laws through ignorance.

The study of the text-book on physiology should be deferred until the pupils are old enough to understand and appreciate it; but there are certain laws of health that should be taught to the entire school, and certain requisites demanded by those laws should receive the unremitting attention of every teacher. It is impossible to give a complete list of all the things that should and all that should not be done, but we mention a few of the most important matters which should receive attention.

“**Cleanliness** is indeed next to godliness,” and it is the teacher’s duty, not only to the individual, but to the school at large, to insist on cleanliness of person on the part of each member of the school.

Position.—When pupils are reciting, see that they stand squarely on both feet, with the heels together, shoulders back, and head erect. When at their desks, see that pupils do not lounge or sit in a cramped position. It is not necessary to act the martinet in this matter, but a little care will probably save many little children from strained eyes, weak lungs, round shoulders, and ungraceful habits.

Voice and Lungs.—When children are reading or speaking, whether in ordinary recitation or in vocal exercises, individually or in concert, see that they use their voices and lungs properly. The voice should be pitched in its natural conversational key, neither higher nor lower. The *tones* of the voice should always be distinct and resonant, *but never loud*. The manner of breathing is of the greatest importance, in vocal drills especially. Two points should be insisted upon: first, the breathing should be carried on as much as possible through the *nose*, and not through the *mouth*; second, the inspiration should distend the abdomen and the *lower* part of the chest. *The shoulders and upper part of the chest should never be raised, in taking breath, under any circumstances.*

The celebrated Dr. Lennox Browne, of England, and Professor Emil Behnke, in their joint work, "Voice, Song, and Speech," lay much stress upon the importance of correct breathing. We quote a few passages from their book which bear directly on school training in this particular:

"The criterion of correct inspiration is an increase in the size of the abdomen and the lower part of the chest. Whoever draws in the abdomen and raises the upper part of the chest breathes wrongly.

“While we urge the importance of nose breathing for full inflation, which is an act to be performed slowly, steadily, and gradually, we do not deny that for rapid half-breaths occasionally demanded by singer or speaker, inspiration by the mouth is not only justifiable but unavoidable. Habitual practice, however, in mouth-breathing can only lead to great discomfort, if not to actual and direct mischief of the throat, windpipe, and chest; and such is very probable to result in the foggy and and cold-damp weather of spring, autumn, and winter. . . . It may be added that even asthma and other serious chest diseases are induced from this cause, and that purity and resonance of all vocal tone is diminished or destroyed in proportion to the amount of closure [of the nasal passages].

“It is not out of place here to mention that respiratory exercises, and subsequently lessons in reading, reciting, and singing are oftentimes of the greatest use in strengthening a weak chest; and, indeed, it is not too much to say in arresting consumption.”

Temperature and Light.—In regard to temperature and light, the teacher is largely governed by circumstances beyond his control, but he can always make the best possible out of those circumstances. The school room ought to be thoroughly well ventilated and well lighted, free from drafts, and protected by proper curtains or shades from the direct glare of the sun. The heating apparatus should be such as to preserve a proper and uniform temperature. Every school room should be supplied with a thermometer, which should be hung in such a place as will best show the average temperature of the room. It should not be hung more than four feet above the floor, near a window or heater, nor

on an outside wall. A thermometer properly hung should not be allowed to vary much from 70° Fahrenheit.

If all these conditions can not be obtained, do the best you can to approximate to them. Do not allow a child to sit too near a register or a hot stove, nor in a draft. Neither should a child be allowed to work with the direct sunlight falling upon the paper before him, and dazzling his eyes.

Wet Clothing.—Do not allow children to sit in school with wet feet or clothing. If they live too far away to be sent home to change their garments, they should at least be compelled to dry both feet and clothing thoroughly before taking their seats. If this is impossible, it is far better to send them home for the entire day than to have them run the risk of serious illness.

Exercise in the open air and sunlight is a necessity to health, and the younger children especially need abundance of time for this kind of relaxation. The teacher, however, should regulate the exercises, if possible, and warn the children of the dangers of violent exercise, both from over-exertion and from over-heating, and then suddenly cooling, the body.

The entire school should be exercised in light gymnastics at least once each day, and oftener if possible. Simple apparatus, such as wooden dumb-bells, rods, and rings, are desirable, but not essential.

If it is possible to do so, employ a few minutes each day with military drill. The excellent effect of this species of drill is well seen in the superior carriage of soldiers and of boys who attend military schools. A very little study of any manual of tactics will give the teacher all the information necessary to conduct this drill, and the results will be found well worth the time

and trouble bestowed. When the weather will permit, the drill should be conducted in the open air on the playground.

THE ECLECTIC PHYSIOLOGY.

Physiology is usually a very interesting subject to pupils, and it is not a difficult subject to teach thoroughly if it is properly treated.

The Teacher's Preparation for conducting his class in their study is of supreme importance. The teacher needs to be *familiar* with the subject-matter of the science, and his knowledge must be fresh; hence, he should study the subject as thoroughly as circumstances will permit, and not confine himself to the text-book used by the class; and if he has made a thorough study of the subject in times past, but is somewhat "rusty" in his knowledge, he should review the entire subject thoroughly before entering upon class-work.

In addition to this general knowledge of the subject, it is of great importance that the teacher should have a special knowledge of the text-book in use. He must understand the aims of the author, the scope of the work, and the plan of arrangement, including the order of topics and the dependence of the various parts of the treatise. Moreover, each day's lesson in turn should receive the teacher's careful attention in advance of attempting to conduct the recitation.

The Purpose of the study of physiology is two-fold:

1. To give the pupils valuable information.
2. To discipline the minds of the pupils by encouraging the habit of sound and systematic thought.

The value of the knowledge gained depends upon the

impressiveness of the lessons in hygiene, whereby the pupils should learn to take proper care of their bodies, that they may most effectively maintain good health and avoid disease and weakness.

The disciplinary value of physiology depends upon an intelligent and systematic method of instruction upon the part of the teacher, and a corresponding method of study on the part of the pupils.

The Plan of instruction should conform to the two purposes just stated. The hygienic features of the science are of paramount importance, and therefore demand the greatest share of attention. Only so much of anatomy and physiology need be learned as will form a basis for intelligent instruction in hygiene. In other words, the pupils are not to be taught as if they were to become surgeons and physicians, but in such manner as will best prepare them for healthful, every-day life.

Errors to be Avoided.—The teacher who sees clearly from the beginning the chief importance of hygiene, will be likely to avoid three great errors that are quite common with teachers of physiology:

1. Giving too much attention to the details of anatomy.
2. Making too little practical application of the science to the common affairs of life.
3. Teaching facts in a disconnected and unrelated manner.

Aids.—In the study of the human body, the pupil needs to be thoroughly impressed with the fact that he is studying about *his own* body,—not some body represented in the pictures of his book, or on the charts, but his own, living, throbbing body. To secure this great

end, the teacher must constantly require the pupils to refer to their own vital processes. They can examine the skin, can notice the breathing, can feel the pulse and heart beat, can examine the eye, and can feel the bones and muscles. They know, also, what hunger and thirst are, what food is, what pain and sickness are, what each special sense gives them. Let the children commence work by considering such facts concerning their own bodies, and their own vital processes; then the lessons of hygiene which they learn will come very close to them, and they will be likely to apply such lessons to their actual experiences.

To aid in creating an interest in the mechanism of the human body, and in giving a clear idea of it, the teacher should use good charts, from which the pupils may more readily see the structure and relation of the parts. Plain, simple charts are valuable aids, because, on the one hand, we can not perform dissection in the school room; while, on the other, purely verbal descriptions are usually feeble as compared with pictorial representations.

In the absence of charts, the teacher, by some effort and practice, may draw many figures upon the black-board, illustrating the parts of the body. The pupils will usually be much interested in making such drawings for themselves.

In addition to what has already been suggested, the teacher may obtain interesting material from slaughtered animals with which to show the character and arrangement of the similar parts of the human body. A hog's heart resembles the human heart very closely. By cutting open the hog's heart, the structure and arrangement of the human heart may be studied objectively. In like

manner, the teacher may show the class the structure of the lungs, liver, kidneys, intestines, bones, joints, eyes, etc., etc. The use of such material for illustration intensifies the interest and impresses the mind far more forcibly than either verbal or pictorial representations.

Time of Recitations.—It would be well for the class in physiology to recite *daily*. A short lesson each day is to be preferred to longer lessons on alternate days. In a mixed school, in which the teacher has many classes each day, the lesson in physiology need not exceed twenty-five minutes in length.

Proper Division into Lessons.—A class of ordinary pupils can complete the Eclectic Physiology in one school year of five or six months. A strong class might possibly complete the work in sixteen weeks or less. Nevertheless, it is urged that the teacher aim at thoroughness rather than rapidity.

Seventy-five lessons may be considered the average number for a strong class, and certainly no fewer than fifty lessons should be attempted under any circumstances. If fifty lessons are all that can possibly be given the subject, the following division may prove of value to the teacher in assigning lessons:

Introduction	<i>Two lessons.</i>
Bones	<i>Three lessons.</i>
Muscles	<i>Three lessons.</i>
Skin	<i>Two lessons.</i>
Food	<i>Two lessons.</i>
Digestion	<i>Three lessons.</i>
Circulation	<i>Five lessons.</i>
Respiration	<i>Five lessons.</i>
Excretion	<i>Two lessons.</i>
General Nervous System	<i>Five lessons.</i>

Touch, Taste, and Smell	<i>Three lessons.</i>
Sight	<i>Three lessons.</i>
Hearing	<i>Three lessons.</i>
Sanitary Science	<i>Two lessons.</i>
Effects of Alcohol	<i>Two lessons.</i>
Reviews and Examinations,	<i>Five lessons.</i>

TOTAL, *Fifty Lessons.*

If seventy-five lessons can be given, the teacher should divide the subjects proportionately to the above list.

The teacher should decide before commencing work exactly how many lessons he proposes to give, make out his schedule accordingly, and then hold firmly to his plan. If he adopt this method, he will find that the pupils will complete the subject within the allotted time, and that, at the same time, the topics in the latter part of the text will receive as full consideration as those treated in the beginning. If this method be not adopted, there is danger of dwelling too long on certain portions of the text at the expense of others.

Subdivisions of Topics.—After the teacher has examined the text-book carefully, and has decided both as to the length of time that is to be given to the study, and as to the number of lessons into which the subject is to be divided, as above suggested, he must next determine definitely the exact limits of the *subdivisions* to be made, else the lessons designed to treat of any division of the text may not cover the ground they are intended to include. To illustrate this point, the five lessons assigned for the study of circulation must divide that subject properly. It is supposed that the class has just studied the subject of food and the process of digestion. As the food makes blood, it would seem

proper that the class should take for its first lesson in circulation the subject of *blood*. Certain facts are to be learned about the blood: for example, what the blood is, its importance, its uses, its composition, etc. To learn these facts, the pupils must study articles 66 to 71 inclusive, and must read carefully notes 1, 2, and 3. The second lesson should include *the organs of circulation*. These are treated of in articles 72 to 77 inclusive, and notes 4 and 5. The third lesson should *trace the circulation*, as taught in articles 78 to 81 inclusive, and note 6. The fourth lesson should include the remaining articles of the chapter, and the teacher should pay particular attention to the hygiene of circulation. The fifth lesson should review and unify the whole chapter.

In a similar manner the teacher should divide each chapter of the book into lessons of appropriate length, taking carefully into consideration both the time allotted to a recitation and the total number of lessons that must include the entire subject.

Advantages of System.—Let us repeat that all this planning should be closely studied by the teacher before commencing work at all. If the suggestion be heeded, the teacher will find that this definite planning of work will materially add to the efficiency of his instruction in physiology. It aims to accomplish the following excellent results:

1. The orderly presentation of matter.
2. The due division of time among the several parts of the subject.
3. Systematic and intelligent study on the part of the pupils.
4. Topical and methodical recitation of the lessons thus learned.

Lead pupils to study with the idea of orderly arrangement of topics constantly before the mind. If the teacher requires pupils to *recite* in an orderly manner, they will naturally learn to prepare their work in that way.

Bear constantly in mind that the two important aims in the study of physiology are to have the pupils acquire a valuable knowledge of the subject, and to train the mind in systematic and forcible action. Both of these aims are to be attained most readily by the classified form of study and recitation.

But beware of bare outlines. The danger in the use of outlines in class-work is that the teacher may use the outline merely as a skeleton, and not put upon it the necessary flesh in which the skeleton should be imbedded. Classification learned simply as such is of very little use, and teachers should guard carefully against teaching in this way.

On the Conduct of Recitations.—Let us suppose that the teacher has assigned a lesson in physiology, and the time has arrived for the recitation. It is supposed that the pupils have been definitely informed as to what to study, and that they know what is to be the plan of recitation. It is not necessary, therefore, for the teacher to ask where the lesson is, and to proceed to ask question after question, to which the pupils give answers. He may direct one of the pupils to state the lesson, and to proceed to recite the first portion of it. At a suitable time the teacher should excuse the first pupil, and ask another to continue the recitation. Passing from one to another in the class, the lesson is soon recited. The omissions made by those pupils who have recited may now be supplied by other pupils. Criticisms may be

made on the recitations by both pupils and teacher. Questions may be asked to still farther test the pupils in their understanding of the matter recited.

Specimens may be examined illustrating the subject under consideration. Recitations may be made from the charts, in which case the pupils point out the representation of the parts described. The pupils may ask questions about any points of particular interest to them, or about such parts as they do not well understand. The notes which refer to certain parts of the lesson may be read aloud. The pupils may write out an outline of the lesson upon the blackboard.

The connection between the present lesson and the new lesson that is to be assigned, may be stated by the teacher, and he may call special attention to important and interesting features of the new lesson. Whatever will tend to deepen the interest of the pupils in the study of the subject should be done. Encourage the pupils to converse and to ask questions about the subjects studied.

To illustrate still more fully, suppose the class is just beginning the subject of respiration, and that the lesson is articles 85, 86, and 87. Here are certain important points to be brought out in the recitation: The constant demand for air by all living things. The air must enter the blood and be circulated,—no other want is more urgent. How plants breathe. How fishes get air. How the higher animals breathe. What respiration is. What the uses of the air are. What the general plan of respiration is. How the air enters the blood.

The ten points just enumerated cover the matter included in the articles, and might form the topics for the recitations to be made by the several pupils of the class.

The teacher might ask such questions as the following to test any member of the class: What are the purposes of respiration? How does the need of air compare with the want of food? How do trees breathe? How do water animals breathe? How do land animals breathe? How do we breathe? Why do all living things need air?

Let it be supposed that the class is to recite the first lesson of Chapter XIV,—“Sight.” The topics in this lesson would include the matter contained in articles 135, 136, 137, 138. The chief topics are as follows: Sight, what it is. What we learn from the sense of sight. The eyes, what are they? Description of the eyes. The protecting parts of the eyes. Tears, what are they? Their origin and purpose. How the eye-balls are supported. How they are moved.

When the pupils have recited these topics, the teacher may test them by many questions, such as the following: What is it that comes into the eye from the objects we see? What do we learn by seeing anything? Why are the eyes placed as they are? How do the orbits protect the eyes? Of what use are the brows and lashes? What glands are connected with the eyes? Whence do the tears come? How are the eye-balls kept clean? How do we turn the eyes?

In connection with this lesson and the one that follows it, the teacher should dissect an eye for the class, as described in note 1. Each pupil may learn much by looking at the eye of another person, and by touching and examining his own eye. If the teacher can secure the use of a convex lens, he may perform many interesting experiments with it that will show the action of the lens of the eye.

It only remains to say that while physiology is usually a very interesting study to children, yet no subject can be made very interesting to a class by a teacher who is himself devoid of interest in that subject. On the other hand, the more real interest the teacher can put into the work, the more enthusiastic will his class be in the study of the subject. The more impressive the lessons of hygiene are, the more valuable will the information be to the pupils.













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